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SUMMARY

English version

Objectives

The aim of the present project is threefold:

-To propose clear and specific strategies derived from relaxation and yoga to improve students' attention and to facilitate classroom management in the long term.

-To propose practical techniques to reduce the stress level of the teachers in order to improve their sense of engagement and, as a consequence, to reduce the stress level of students. The proposed techniques will be applied and assessed during the training period in a high school.

-Detection and analysis of similarities in the strategies proposed by yoga and relaxation techniques and the competency-based education. Prospection of future interdisciplinary integration of yoga and relaxation techniques in the curriculum and derived benefits.

Summary

This project focuses on the possibility of integrating yoga and relaxation techniques in the new competency-based paradigms that will unfold in Catalonia during the years to come. To do so, this project engages theory and practice so as to assess the feasibility and application of the proposed techniques in a real high school environment. It must be clearly stated that the proposed practices are completely disconnected from religion, dogma or cultural Asian background; the present proposal, then, points out to detect and apply breathing and relaxation techniques that have been widely used both in Western and Asian cultures in the form of mind-centering practices.

To tackle with this goal, the present project deals with three different approaches with the main objective of providing the reader with an objective perspective regarding the possibility of applying relaxation techniques to the daily routine of Catalan high schools:

Yoga and relaxation to improve the classroom management

During the last years, several studies have pointed out the promising perspectives on the application of yoga and relaxation techniques to improve the attention and executive function of children and adolescents (Mak, Whittingham, Cunnington, & Boyd, 2018). In the present project, the main classroom management issues will be highlighted. Then, body-consciousness and self-perception "ready-to-use" practices will be designed with the goal of improving, not only the learning experience, but also the relationship with the classmates and with the blocking emotions that usually prevent us from learning in a fruitful way.

Teachers and students in danger: the snowball effect unleashed by stress

There is a plethora of studies that points out the negative effect of stress in the sense of engagement of teachers respect to their daily task. Sadly enough, they also highlight the negative effect of “burn-out” teachers on the students who, in their turn, also become more stressed (Oberle & Schonert-Reichl, 2016). This effect was specifically studied for beginning teachers (Harmsen, Helms-Lorenz, Maulana, van Veen, & van Veldhoven, 2018). The question is: how do we face our task as teachers in a world that spins faster and faster? How to become an example for our students if we struggle to keep the pace of the classes? In this research project, practical techniques that teachers can apply in order to regain the sense of self-control and mental-centering are proposed. These techniques will be implemented in a high school and conclusions will be drawn from the feedback obtained.

Competency-based learning and relaxation/yoga techniques: a promising future together

Competency-based learning and relaxation/yoga techniques, share a core that is deeply rooted in interdisciplinarity and both offer a multi-dimensional approach when it comes to deal with human beings. These two methodological streams converge on the goal of offering the student a complete and equilibrated development. The question is: is it possible to engage positive synergies to take profit from both disciplines? Which are the main pitfalls that we will find in the way? And finally, which are the future perspectives?

Catalan version (executive abstract)

Els estudis científics apunten a l'efecte negatiu de l'estrès sobre el sentiment de pertinença al grup i d'identificació que experimenten els docents en la seva tasca quotidiana. Amb l'objectiu d'afrontar aquesta situació, aquest projecte investiga i proposa tècniques pràctiques suportades per estudis científics que els docents poden aplicar per recuperar el sentit d'autocontrol i de centrament mental durant el desenvolupament de la seva tasca en un institut. Així, es presenten propostes a dos nivells: el primer, tècniques per millorar la percepció del professorat envers la seva tasca; el segon, tècniques a aplicar a classe per oferir eines als alumnes en la mateixa direcció. Finalment, el projecte presenta una prospectiva que pretén establir ponts entre l'educació competencial i les tècniques de relaxació.

Spanish version (executive abstract)

Los estudios científicos apuntan hacia el efecto negativo del estrés sobre el sentimiento de grupo y de veracidad personal que experimentan los docentes en el desempeño cotidiano de su labor. Con el objetivo de afrontar esta situación, el presente proyecto investiga y propone técnicas prácticas apoyadas por estudios científicos que el docente puede aplicar para recuperar la sensación de autocontrol y de centramiento mental durante el desempeño profesional en un instituto. En este sentido, se proponen propuestas a dos niveles: el primero, técnicas para mejorar la percepción profesional del docente; el segundo, técnicas que se pueden aplicar en clase y que ofrecen herramientas a los alumnos tanto en el plano físico como mental. Finalmente, el proyecto presenta una prospectiva que pretende establecer puentes entre la educación competencial y las técnicas de relajación.

ACKNOWLEDGEMENTS AND NOTICE TO SEAFARERS

Although placed in the beginning, this was the last chapter of this literary and scientific adventure. And I say so because one of the deepest aims of this project is to contribute to erase the lines that we humans draw to compartmentalize the phenomenal amount of knowledge and experience that we all gathered as a species. The ontological centaur that Ortega y Gasset proposed a century ago has, in its inner construction of its own destiny and in the words of the philosopher Pérez Borbujo, cracked human science in a thousand small pieces that technologists like Dr. Antonio Hernández try to put together so as to re-assemble and close the gap between almighty humans and the rest of the animal species that trudge the Earth.

The present project is, from the humblest of the positions, an attempt to recreate the great adventures of the past. In the real world of facts, that very one of the Beagle across the seas, a floating library where young Darwin, far from the immediacy of the media and nets that fragmentate our attention with messages, notifications and urgent calls, wrestled the victorian conception of both the World and God with the only help of an invincible faith in him and in the works of Humboldt.

In the world of fiction, may I ask you to engage yourself with me in the masterpiece of Herman Melville, *Moby Dick*, who will accompany us along the whole reading. Because, although the present project is interspersed with a remarkable amount of scientific citations and objective data, there is something that papers will never be able to grasp and that remains in the field of literature, that is, emotions and human longings for transcendence. The history of captain Ahab, Ismahel, Queequeg and the crew of the Pequod is nothing but the very theatre where everything that science cannot define is deployed and performed. And what is education but a longing for transcendence, a desire to leave a better place for others to keep on searching for their White Whales? What is a teacher but a young Ismahel that, fed up from the dullness of life and the comforting numbness of the heath, enrolls in the Pequod, an unknown vessel commanded by a mysterious captain that will confront him with the light and darkness of existence?

And thank you, dear reader, for being there and for daring to join this adventure. May it, at least in an infinitesimal way, helps us to be more human.

TEACHERS AND STRESS

"Call me Ishmael. Some years ago, having little or no money in my purse, and nothing particular to interest me on shore, I thought I would sail about a little and see the watery part of the world. It is a way I have of driving off the spleen and regulating the circulation (Loomings)".

Stress at work: a social concern

Society as a whole faces new and compelling challenges while moving along the XXIst century, the so-called "bio-technology" or "information-society" era. The unstoppable evolution of human being leads us towards new technological wonders, even in the form of human-machine interfaces that Jules Verne was incapable of dreaming about and that today are common places for transhumanists and technological gurus, who promise everlasting life and fruitful and rewarding existences (Kurzweil, 2010).

This exciting future is, nonetheless, shadowed by real and striking facts that shake our world from head to toe in the form of inequalities, poverty and illiteracy. Even the so-called first world does not escape the remarkable tensions that arise from fast-paced changes and economic turmoils. In fact, the shadow of stress is perhaps the quintessence of the inapprehensible unease that embeds the wellbeing state in modern capitalism.

It is not in the scope of this work to analyze in depth the subject of stress; may I evoke it as a tool, as well as the painter stretches its canvas so as to support the very traces of colour that constitute the core of that which is really meaningful.

The report of the European Agency of Health and Safety at Work (EU-OSHA) about the topic of workforce stress proposes a variety of definitions for this widespread problem that has become the second threat in the working environment after the musculoskeletal conditions (Milczarek, Schneider, & González, 2009); it can be, in fact, considered as a nonspecific response of the organism towards external aggressive factors (being that aggression objectively or subjectively perceived), the so-called stressors, that trigger a variety of undesirable chain of events: changes in heart beat rate and breathing, depression of the immunological system, chronic tension in certain parts of the body (physiology), the awakening of strong negative feelings and self-esteem attrition, sense of social world hostility (psychology) and decrease of productivity (behaviour). Some authors point out that the balance between the perceived external demands and the perceived inner resources plays a key role on the onset of stress (Lazarus & Folkman, 1984). However, the pragmatism of EU-OSHA proposes a crystal-clear definition: "work related stress is experienced when the demands of the work environment exceed the workers' ability to cope with (or control) them".

The percentage of european workers that state being under stress remains stable all along the onset of the century (around 22%) due to the balance between two main factors: while weekly working hours tend to decrease, the intensity of the job increases. In this line, the sense of job control, that is, the capacity of managing task schedule, working rhythm and

pauses is one of the main factors that are considered by experts. Other factors are physical or sexual harassment (professionals in the educational and health sectors report the higher rate of the Union in this specific factor) and the productive sector, being health, education and agriculture those who report the higher stress rates (up to 28.5%). Not surprisingly, self-employed individuals report higher rates than employed ones, mainly due to the uncertainty they experience. Although Spain shows the highest temporary-contract rate of the Union (22% in 2017) ("Eurostat - Tables, Graphs and Maps Interface (TGM) table," n.d.), the permanent-contract professionals are the most prone to visit the doctor according to work-related stress (up to 93% in 2003). As a whole, the four main reasons why Spanish workers go to the doctor are 1) backache, 2) neckache, 3) pain in an upper limb or shoulders and 4) stress. Quite a picture, indeed. And a warning about the importance of postural and mental hygienic practices for the years to come.

In their prospection for future trends and challenges, the experts of EU-OSHA propose five key directions that have to be tackled during the next years. Firstly, the adaptation of the workforce to fast changes in marketplace and dealing with insecurity at a psychological level; secondly, the ageing of the workforce; thirdly, the increment of the work pressure and intensity of work; fourthly, the increment of emotional demands in a wide variety of jobs; and finally, the disparition of the line that separates work and private life due to the onset of information technologies (Milczarek et al., 2009).

Policies have been undertaken to deal with stress at work, a circumstance that already affects 40 millions individuals in the European Union (Parent-Thirion & European Foundation for the Improvement of Living and Working Conditions, 2007). Directives that point out the necessity of a new culture of stress prevention have been established and different social actors have been called to take part on this evolution towards better practices at work and extended social consensus and dialogue. Nevertheless, the subtle and multifactorial nature of the problem encloses challenging difficulties: how to assess stress? How to quantify it? How to prevent it and which are the specific factors and the relationships between them? It is well known that objective as well as subjective factors have to be taken into account: the impact of stressors is very different between individuals and both cognitive and emotional processes play a key role (Leka & Kortum, 2008). A group of countries leads the way by implementing assessment strategies as the HSE in United Kingdom (Brookes et al., 2013) and the START program in Germany (Satzler, 2009). The Italian system, the INAIL-ISPEL (Colombini et al., 2003), goes as far as to introduce the mandatory assessment of all workplaces by the employer. Although some progress has been made, the implementation of these measures is far from rendering positive results: the lack of awareness of the population itself and the inadequate infrastructure, as well as difficulties with methodologies themselves result in scarce advance: Last, but not least the stigma of mental illness keeps on being so strong that open dialogue remains a taboo (Hinshaw, 2009).

Teachers' stress. What is it and how to quantify it

"I, Ishmael, was one of the crew; my shouts had gone up with the rest; my oath had been welded with theirs..."
(Moby Dick).

The bibliography on the topic is vast and plenty of different definitions have been proposed in the past (Kyriacou & Sutcliffe, 1977) and refined in recent studies. For the sake of simplicity, all of them agree that stress implies a negative feeling which is aroused by the fact that the teacher feels that he or she is unable to cope with the demands of the working environment. If this situation is maintained for a period of time or even becomes chronic, it leads to physiological, behavioral, and psychological problems and burnout (Sapolsky, 2004). Seminal works about teachers and stress focused on the objective facts that common sense points out as stressors, such as class size, number of students that are prone to conflict or that need special attention, lack of institutional support or bureaucracy (Moriarty, Edmonds, Blatchford, & Martin, 2001). In a sense, they proposed that certain "inputs" coming from the environment result in specific "outputs" as job satisfaction or commitment to keep on being a teacher. The core of these works is that the responses of interviewed and surveyed teachers were considered to reflect the objective nature of highschool reality. In other words, these researchers considered that teachers behaved as "transparent" pieces of the educational machine and that their answers were not significantly affected by their personal points of view. The question is: can teachers be regarded like that? The magnitude of the issue suffices to alert us: the level of teachers' attrition increases year after year; In the United States one third of novel teachers leave the field of education during the first 3 years of service (Carroll, 2009); in Europe, the attrition rate for novel teachers is between 8-10% per year (With, 2017); Spain sports a turnover rate of 30 to 40% during the first 5 years (Struyven & Vanthournout, 2014); something escapes in an elusive way these mechanistic models.

More recent models, backed up also by pioneer works on the field propose that stress builds up as the result of an unbalance of subjective factors (Meurs & Perrewé, 2011). From this stream of thought, the transactional model of stress (Lazarus & Folkman, 1984) and its Demands and Resources system is remarkable for its clarity. Indeed, it proposes that the inner perception of Resources of the teacher to face the Demands of the task is the key to understand the stress response. The method, empirically applied using the Classroom Appraisal of Demands and Resources (CARD) (R. G. Lambert, McCarthy, O'Donnell, & Wang, 2009) proposes that the proneness to stress can be anticipated by classing the teachers in three defined groups according to their subjective and personal responses regarding their own abilities and the feelings they experience in front of a classroom or in the working environment as a whole: those who have more Resources than Demands (the Resourced group), those who show a balanced response (the Balanced group) and those who consider that Demands exceed their Resources (the Demands group). Because of the widely acceptance of this model and the non-exhaustive nature of this discussion, the train of thought of the present project will be based on CARD so as to unfold the problematics of stress and the applicability of relaxation techniques to lead with it, prevent it and mitigate it.

CARD and its transactional basis proposes two main processes that take place at the same time: the first is the automatic, unconscious teacher appraisal (or estimation) of Demands and Resources; the second, the teacher's ability to remain as realistic and equanimous as possible in order to deal with daily challenges or threats, depending on the subjective perception (Lazarus, 2001). The present project shows the suitability of relaxation techniques to work on some of the categories of Resources and to develop equanimity as a personal skill.

Resources can be classified in 4 different groups according to the Preventive Resources Inventory (McCarthy, Lambert, Curlette, Seraphine, & Beard, 2001), being the two former widely analysed elsewhere (Allender, 2017):

- Maintaining perspective, defined as the ability to be aware of emotions that are stress-inducing and remain detached from them.

- Social resourcefulness, defined as the ability to effectively interact with others and create personal networks.

- Self-acceptance (SAC), defined as the ability to accept one's flaws and strong points and to remain flexible in front of reality. The usefulness of relaxation practices to boost this specific Resource is discussed elsewhere (McCarthy et al., 2001).

- Scanning, defined as the ability to get the whole picture and to anticipate forthcoming events.

These four groups, which encompass a wide range of coping resources wonderfully detailed elsewhere (Matheny, Aycok, Curlette, & Junker, 1993), point out the urgent need to develop personal/emotional skills, specially for those teachers ranged in the Demands group. It is interesting to note that teachers in the Resources and Balanced groups do not show quantitative improvement in terms of stress-level when furtherly formed in personal skills: it is not a matter of pilling up resources or providing formation courses to all the teachers; those who really take advantage of them are those in the Demand group (Feuerhahn, Bellingrath, & Kudielka, 2013).

Teachers burnout: the long-term consequence of stress

"It was hardly to be doubted, that several vessels reported to have encountered a Sperm Whale of uncommon magnitude and malignity..." (Moby Dick)

When teachers repeatedly fail to deal with the demands that arise in the workplace, having in mind that these demands are not only objective but mainly subjective, a well-defined job-illness which was initially mostly observed in the health-sector workers appears, frequently on a chronic-basis (Carson, Plemmons, Templin, & Weiss, 2011). Frequently linked to three main factors, that is, the lack of support from the rest of the teachers, principal and administration and a shortage of physical resources to successfully face the teaching act and the disruptive behaviour of some students, it leads to three well defined

psychological and behavioural symptoms: emotional exhaustion, a lack of trust towards their colleagues and the system which is exteriorized as a sort of cynicism and a lack of self-achievement in the working environment, being the first one the core manifestation of the problem (Boersma & Lindblom, 2009). Interestingly enough, the application of the CARD model to the “emotional exhaustion” parameter revealed the lurking subjective nature of burnout syndrome: remarkable differences were found between individuals working in the same school, differences significantly much higher than those obtained for teachers working in different centers (Ullrich, Lambert, & McCarthy, 2012).

WHY ARE TEACHERS LEAVING THEIR JOBS?

"The White Whale swam before him as the monomaniac incarnation of all those malicious agencies which some deep men feel eating in them, till they are left living on with half a heart and half a lung." (Moby Dick).

Teachers' turnover: an unsolved question

During the last decades, migratory movements and the subsequent increment in the number of students has been widely accounted for the overwhelming need of teachers in Western world countries (Ingersoll, 2001). Nevertheless, the lurking reason beneath the demand of teachers is their remarkably high turnover rate. In fact, just a small amount of teachers are leaving their jobs because of retirement; large numbers of them leave the profession to pursue another career, mainly because of low student engagement, low support from administrations, low salaries and reduced decision-power (Ingersoll, 2001).

The need for more teachers was already predicted during the 80's in the United States, both in elementary and secondary schools (Darling-Hammond, 1984). The alleged reasons? More students and a staff that was growing old. Inevitably, the studies remarked that this fact would end up with an underqualified teachers' force and the subsequent downfall of students performance. The United States engaged a variety of programs to enroll new blood and they even accepted undergraduates to perform as teachers (Zhao, 2005). In the same line, during 2018 the Department of Education of Catalonia did the same thing by allowing individuals without the formerly required graduation (a master's degree in education) to exert as teachers ("Mestres sense màster en formació del professorat," 2018).

As it can be seen, the priority of the cited governments is to mask the high turnover rate by increasing the supply. Nevertheless, the literature about organization management is crystal clear: a high turnover rate of employees is due to dysfunctional and poorly-managed organizations (Kalleberg & Mastekaasa, 1998). This effect is deeper in organizations that are profoundly sustained on the interaction between individuals and that are not based on technology-routines, that is, the very case of education (Walton, 1980). In other words, the "revolving-door" effect that leads teachers to leave the field is not addressed but managed by brute-force and the structural reasons that promote the low-retention of professionals inside the system remain untackled. In order to face it, studies propose that, instead of increasing the supply, measures should be enforced to reduce the demand (Ingersoll, 2001).

Teachers' accountability and the culture of performance

The present revolution in the educational world and the forthcoming change of paradigma that represents the competency-based system is often presented as a challenging and compelling step forward in terms of quality of teaching and quality of learning. Nevertheless, there is a stream of thought that points out the dangers of this revolution as being the creation of the neoliberalist tendency that, step by step, embeds, not only macroeconomics, but also our everyday life in a way that can even become unconscious to our eyes, which are getting used to it (Sinclair, Ironside, & Seifert, 1996). The nature of the present project and its core object, at least this is the way I understand and interpret it, is to reflect on

education and on the place we, future teachers, will occupy: what we will stand for, what we will fight for. Then, the forthcoming lines present arguments that can be applied, not only to the teaching professions, but also to any job or professional interaction.

The last decades of the previous century were already marked by the overpowering influence of the OECD and the World Bank in terms educational guidelines and policies (S. Ball, 2002), namely focusing on accountability, performance and control. These policies consist on a series of techniques that organize and manage human resources according to a centralized power network. The question is: why the OCDE and the World Bank have become the guarantors of education?

In this widespread system of control, performance is the key word. Being employed to judge, regulate and measure, it compares and ranks its actors so as to increase productivity (output). This idea, which we have widely accepted and interiorized as the sole way to progress, contains the seed for the turmoils that teachers and other professionals, I would dare to say that all society, face on an increasing basis: individuals are also judged, measured and compared so as to make them meet the proposed standards. Again, who is it that sets the standard? What does it mean to be a teacher today? Which is the standardised relationship between teachers and between teachers and students? (S. J. Ball, 2003)

Doublethink, the sadly famous term coined by George Orwell comes to mind (Orwell, 1983), meaning “the act of simultaneously accepting two mutually contradictory beliefs as correct, often in distinct social contexts” (“Doublethink,” 2018). While being offered an apparent freedom of movements, teachers’ action and individuality is heavily regulated by an intricate network of moral and tangible constraints that are the cornerstone of advanced liberal systems (Sharma & Gupta, 2009). In a sense, teachers are compelled to become entrepreneurs of the education, to become objects that valorise themselves in a continuous basis with the sole goal of increasing their productivity and employability, concepts that are always closely linked with an increasing competitiveness and the sense of becoming “astounding”, “better than others” (the ranking of teachers in the temporary personnel pool of the Department of Education and the newly adopted race to acquire professional profiles come to mind). Perhaps this fact sounds normal after the economic crisis we have undergone and that, in the meantime, has re-made the self-concept of many professionals that, nowadays and in the future, strive for becoming competent, adequate to the eyes and necessities of the market. Nevertheless, when these immediate requirements do not fit the inner beliefs of teachers, or at least the old values in which these teachers were educated into, an inevitable conflict of lack of authenticity rises. In a sense, the same way a traditional bike is refurbished into an electrical one, teachers are forced to undergo a re-professionalization process that aims to 1) inculcate the need to become flexible and suit the needs of the environment and 2) erase the “outdated” belief that a teacher has to respond to its own values and to remain true to its own ideas (Seddon, 1997). Now that students have become “clients and we have to do our best to serve them” (in the exact words of a teacher that imparts classes in this very master’s degree), we teachers are lost in no one’s land.

"God help thee, old man, thy thoughts have created a creature in thee; and he whose intense thinking thus makes him a Prometheus; a vulture feeds upon that heart for ever; that vulture the very creature he creates."
(The affidavit)

The quest for excellence affects, not only the teachers, but the institutions they work for. In the recent years, the Department of Education has promoted what I consider a full-fledged competition between high schools using a troy horse: yes, high schools have so much freedom to choose their functioning routines and to adapt themselves to the environment they are placed into but, at the same time, they are closely supervised and monitored by the system. This pressure is finally transferred to teachers, which are forced, in order to retain their workplace (it has to be considered that, in the so-called "objective" system of the formerly-cited ranking pool of temporary personnel, principals have the power to claim specific individuals, that is, those who presumably help them to accomplish the productive goals of the institution) to reshape themselves as providers of good and services. In other words, the system asks the teacher to become fully committed in an individual dimension while, at the same time, asks him or her to accept that he or she is an accountable piece that can be exchanged and reshaped to meet the demands of the market. This transformation, not substantially different from that undergone by Winston Smith in the Ministry of Love (Orwell, 1983), is what Foucault calls "the production of bodies that are docile and capable" (Sharma & Gupta, 2009). Again, teachers are encouraged to be resolute and problem-solving oriented while, at the same time, they are monitored both by their employers and their students (it is a current trend that teachers are evaluated by their students by using standardised forms). All this situation, far from evoking a sense of freedom and initiative among teachers, has relapsed into the everlasting search for security in the form of fixed civil service positions, the internecine fight for which results in high levels of stress and emotional attrition (Troman, 2000). *Divide et impera*.

Teachers have become "accountable items". Their performance and that of their high school is measured by a variety of ways and responds to an always-changing haze of criteria which nurtures the unsettling feeling of never being suitable enough: am I doing the right thing? Am I doing as expected? What are the others doing? What I am expected to do? The opaqueness and imprecision of the system leads to a never ending race towards excellence and improvement. In Stanley Kowalski's words "you know what luck is? Luck is believing that you're lucky, that's all... to hold a front position in this rat-race, you've got to believe you're lucky" (Williams & Miller, 2009). While Stanley knew what to do to progress in his profession, teachers do not. While embedded in organisations that will do whatever necessary to survive, and this comprises to change their own philosophy so as to meet the evaluation criteria, teachers feel the presence of their inner sword of Damocles: what we do, is it important by itself because of the education of students or is it shaped by the fact that we have to be compared and standardised with others? This labyrinth leads to unsolvable situations where prioritizing becomes impossible and teachers are harassed by intense emotional responses of shame, guiltiness and envy that respond to the fact that, instead of building their professional (and personal) identity from inside and then fitting it in the system, they are unconsciously forced to reshape their identity to respond to the environment (Bernstein, 2000).

"Do you suppose that the poor fellow there, (...), do you suppose that that poor's fellow name will appear in the newspaper obituary you will read to-morrow at your breakfast? No." (The affidavit).

That being said, teachers deal with two fronts: the first one being the classical attributions (giving classes, talking to students and parents, content preparation); the second one, preparing for being monitored and accounted. This second activity has become extraordinarily time and energy-consuming, fact that reduces the real teacher-student exchange and performance. Nevertheless, while many teachers enroll in their profession because of the first set of tasks, they are mainly accounted for the consecution of the second group, reverting in an inner tension and the feeling of being splitted-up in two, a source of alienation where what matters is not "what I believe, what I consider truthful and meaningful" but "what works".

"Man is what he learns to become: this is the human condition"

"The straight warp of necessity, not to be swerved from its ultimate course - its every alternating vibration, indeed, only tending to that; free will still free to ply her shuttle between given threads; and chance, though restrained in its play within the right lines of necessity, and sideways in its motion directed by free will, though thus prescribed to by both, chance by turns rules either, and has the last featuring blow at events." (The mat-maker).

This sentence from the English philosopher Michael Oakeshott (*The Voice of Liberal Learning*, 1989), resumes one of the main conflicts that teachers have been facing during the last decades and that will presumably keep on enduring for the years to come. And that, of course, troubles their perspective and vision of their own role. The imperant global trend is focused on the delivery of trained individuals, that is, the students. To do so, targets are fixed and tests are established to reach the goals set up by governments. While this seems a reasonable way to proceed, the deep (and masked) change is remarkable: while the old educational tradition pointed towards the consecution of mindful, creative individuals, thinkers that could reach their potentialities and that could preserve and evolve the values distilled from the human experience, the new trends focus on the consecution of results, that is, on passing exams to become a valuable workforce (Pring, 2015).

The role of the teacher, then, becomes profoundly linked with this entrepreneurial endeavour; while he/she may think that his/her role is to form and educate individuals, the purpose of his/her activity is utterly different or, at least, it is evaluated by a different set of parameters. According to that, the performance of the teacher is strictly attached to the performance of the students he/she, perhaps involuntarily, helps to standardise (Odden, Odden, & Kelley, 2002). In fact, one of the inner incoherences that teachers face is that: while the new trends claim to give plenty of freedom concerning the curriculum and the methods employed by the teacher, the goals to achieve at the end of secondary education are completely clear and fixed. According to this, the competency-based education proposes that students should know exactly what they will be asked about before beginning each lesson, promoting the results-oriented education and the feeling that the only thing high school is about is the consecution of a certain grade in an exam where there is no place for wonder or further thinking. At the end of the day, the students become "clients" and the

perception that teachers have about their own role is (or may be) completely different. Why should I be a teacher? (Block, 2008).

"There she blows! There! There! There! There She blows! She blows!" (The mat-maker).

Plenty of studies have dealt with the issue of teachers identity (J. L. Cohen, 2008), (Bukor, 2015), (Beauchamp & Thomas, 2009) and the necessary adjustments to fulfil their new role. A specific study, based on teachers learning how to deal with the transition from the teacher-centered to the student-centered model in a Science Technology Engineering and Mathematics (STEM) environment, showed interesting results: those teachers that considered themselves as having "coaching" skills, adapted really fast. Those who considered themselves as "content" facilitators had a more difficult time to adapt, as they had to interiorize a larger corpus of roles and a deeper transformation. While the final feeling of the vast majority of them was positive, they experience the so-called "resistance to change", which plays an important role as a stressor agent in the field of education (Keiler, 2018).

How the system loses valuable resources

Teachers are a key element in the education system of a country. The increasingly high turnover rate reduces the number of experienced teachers in the system, fact that leads to a less-trained workforce that is not in the best conditions to face their complex job. Just an example: the high school where I am performing my stage staffs 40 teachers. 13 of them were not in that educational center the year before (around 30%). This fact creates a number of problems, both in the management and educational levels: the temporary nature of the workforce dilutes the internal rules of the center and its philosophy, the sense of belonging, the cohesion of the teachers' group and the impact of their teachings on the students, who perceive that their educators are there just on a temporary basis.

-In tempestuous times like these, after everything above and aloft has been secured, nothing more can be done but passively to wait the issue of the gale. (The spirit-spout).

In order to dissect and study the process that leads from teaching to leave the field, McCarthy et al. performed an statistical study by means of the CARD method (McCarthy, Lambert, Crowe, & McCarthy, 2010). While the presented data was collected in the United States and the circumstances there can vary from those encountered in Europe, it is an interesting starting point to understand the inner transition experienced by teachers leaving education as a profession. The study sampled the answers of a highly motivated group of teachers (they were all taking part of a summer course for mathematics teachers). A remarkably high proportion of them declared to have thought about leaving the profession during the last 5-years period. The main reasons were working conditions (disagreement with the kind of tasks required from them, lack of support from the administration), followed by financial and personal issues. After an statistically meaningful analysis of the results, researchers concluded that the effective resignation of teachers is the end of a long path of accumulated perceptions and not a short-term decision, so detecting the onset of specific symptoms is the key to prevent the forthcoming resignation of the teacher. Specifically, Job

Satisfaction was found to be one of these symptoms, while Stress or Self-Acceptance (SAC) were detected to be symptoms that would eventually unclench changes in Job Satisfaction but that were not directly linked with the wish of leaving the field. In other words, SAC acts positively on Job Satisfaction while Stress affects it negatively. A long-term situation of low Job satisfaction unclenches the thoughts about leaving the field (fig.1)

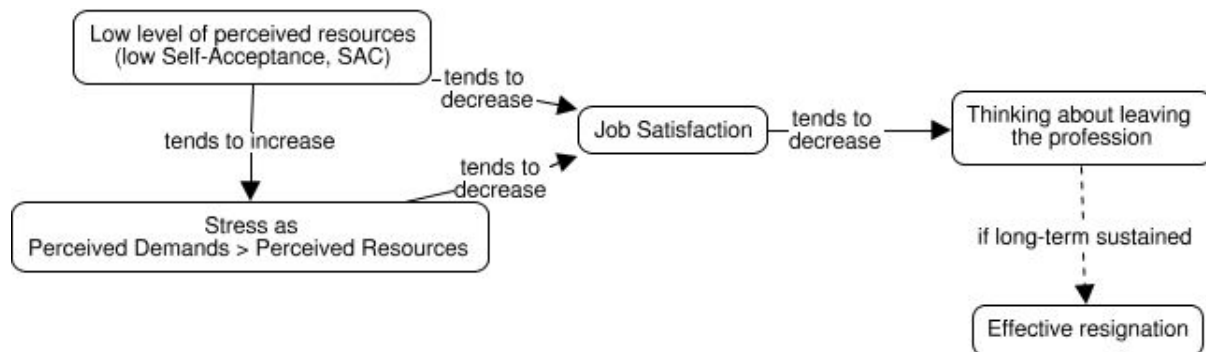


Fig.1. Evolution of stress-cascade as proposed by McCarthy et al. (McCarthy et al., 2010)

Relationship between teachers' stress and students' stress

"But in pursuit of those far mysteries we dream of, or in tormented chase of that demon phantom that, some time or other, swims before all human hearts; while chasing such over this round globe, they either lead us on in barren mazes or midway leave us whelmed." (The albatross).

It has been already shown that teacher's burnout is one of the reasons that explain the remarkably high turnover rate of professionals. Nevertheless, it does not mean that all the individuals that are affected by burnout or noticeable degrees of stress leave the field: demotivated teachers can be found in the classrooms and their effect on the educational process has been assessed (R. E. Hughes, 2001). While positive classroom environment is key to promote the right soil for the student to flourish (Hamre & Pianta, 2006), the opposite is also true and stress can block the learning process and the mental health development of adolescents, especially of those who are at risk and that strongly depend on a positive teacher-student relationship to prevent school failure (Ladd & Burgess, 2001).

On the light of the stress-contagion theory (Wethington, 2000), which claims that stress is transferred between individuals in close social contexts, Oberle et al. performed a very specific experiment to find possible relations between the stress level of teachers and that of students in a specific classroom (Oberle & Schonert-Reichl, 2016). The researchers measured the level of cortisol in the saliva of all the individuals (teacher and students) before and after the class took place. Cortisol level, which augments in response to cognitive (strong emotions) or non-cognitive (infections) stressors (Jessop & Turner-Cobb, 2008), was found to increase in students when teachers with high cortisol levels imparted the class. While levels of cortisol had been already linked to stressful school-experiences in students (Peters, Riksen-Walraven, Cillessen, & Weerth, 2011), the complexity of biochemical responses according to a plethora of factors do not lead to a straightforward conclusion: firstly, it is plausible to think that there is a direct transference of stress towards the students. Secondly, It has also been shown that already stressed teachers deploy poorer teaching and

relational techniques, contributing to a tense and quarrelsome environment which impedes the positive development of the classroom (Aloe, Amo, & Shanahan, 2014). Thirdly, and possibly combining the other two points of view, a relationship loop between teachers and students takes place at a stress-considering level in a sort of feedback system. While more statistical studies linked to physiological tests lack in the literature, specially at the highschool level, it is clear that, in order to improve the span of the educational action and the well-being of both teachers and students, it is mandatory to tackle the stress issue and to deploy the methods and the resources that are necessary to revert it.

“For all these reasons, then, any way you may look at it, you must needs conclude that the great Leviathan is that one creature in the world which must remain unpainted to the last. True, one portrait may hit the mark much nearer than another, but none can hit it with any very considerable degree of exactness.” (Of the monstrous pictures of whales).

MOVING FORWARD: USEFULNESS OF RELAXATION TECHNIQUES

Relaxation techniques and teachers

One of the reference works of the 80's concerning stress in the work environment (House, 1981) specifically deals with the teachers issue; for this case, the author proposes four directions that can mitigate its effect: two of them are linked to practical supports (more and better teaching materials, better feedback about teaching), and two of them are related to emotional supports (the ability to cope with reality and to manage emotions in a positive and purposeful way). A subsequent study based on House's premises proposed that the emotional support provided by psychologists (Lambert et al., 2009) and principals (Littrell, Billingsley, & Cross, 1994) helped a lot to effectively deal with the daily life of the teaching profession and that emotional support is, by far, the most important booster when it comes to evaluate the Job Satisfaction parameter in CARD statistical studies. As pointed out by a variety of authors, and being considered one of the pivotal key points of the present project, stress arousal is a perceptual process, that is, an imbalance between the perceived Resources and the perceived Demands. Then, in order to cope with this imbalance, the quantity and quality of perceived Resources must be increased. As proposed by Allender et al. (Allender, 2017) into the framework of the Perceived Resources Inventory (PRI) model (Lambert, McCarthy, Gilbert, Seabee, & Steinley-Bunigarnier, 2006), maintaining Perspective and Self-Acceptance (SAC) are two of the most valuable skills for teachers.

"For as this appalling ocean surrounds the verdant land, so in the soul of man there lies one insular Tahiti, full of peace and joy, but encompassed by all the horrors of the half known life. God keep thou! Push not off from that isle, thou canst never return!" (Squid).

Yoga

The benefits of yoga, while forming part of a multi-disciplinary approach to prevent stress, anxiety and mild-depression have been thoroughly studied in the literature (Arias, Steinberg, Banga, & Trestman, 2006). Telles et al. (Telles et al., 2018) concluded that, after 15 days of yoga training (body practices, meditation, breathing techniques and philosophy) in a yoga facility, a group of 236 primary school teachers objectively reduced their level of anxiety and improved their overall mental well-being (measured by means of the Warwick-Edinburgh 14-item Well-being Scale, WEMWBS) compared to the control group of 118 teachers that remained in the school. The authors hypothesized that the ability to maintain perspective and to consider what is stressful or not (Telles & Visweswaraiah, 2006), which are two pivotal skills acquired by the practice and learning of yoga, was paramount in the improvement experienced by the teachers. Another study concerning 91 highschool teachers that followed a 5-week extensive meditation course, reported similar results (Anderson, Levinson, Barker, & Kiewra, 1999). However, other studies raised the alarm according to the lack of reliable methodology that embedded the increasing scientific corpus of papers that related meditation and stress-relief (Chiesa, Calati, & Serretti, 2011). A similar discrepancy is present in the literature concerning yoga and stress-control: while there are

hundreds of papers that claim the virtues of yoga as a complementary technique to reduce stress and mitigate mild illnesses (Chong, Tsunaka, Tsang, Chan, & Cheung, 2011), mostly by reducing the cortisol levels and boosting those of serotonin and melatonin, some of them warn that the assessment method is not standardised and robust enough (Hayes & Chase, 2010).

Jindal et al. (Jindal, Gupta, & Das, 2013) suggested that the effect of breathing techniques on the biochemistry of the body and its overall functioning (the effect on the parasympathetic nervous system and the consequent relaxation result, the improved balance between oxygen and carbon dioxide and the distension of the diaphragm) was more powerful, in terms of stress reduction, than the physical yoga (movements, poses), suggesting that shorter and simpler practices could suffice so as to improve the resilience skills of teachers. In this line of thought, an experimental approach to assess the perception of the usefulness of breathing techniques by teachers (Hepburn & McMahon, 2017), reported that teachers reduced their perceived stress level, increased the perceived control over their daily tasks and the balance in their emotional life. They also reported to feel more focused and mind-centered, in line with previous studies that suggested that the practice of breathing techniques develops the skill to experience life in a non-judgemental way (Schreiner & Malcolm, 2008).

“(...) the calm is but the wrapper and envelope of the storm; and contains it in itself, as the seemingly harmless rifle holds the fatal powder (...)” (The line).

Even if they are not the target of the present project, college teachers also deserve a comment in this chapter. Highly strained because of the dual task of teaching and researching, their exposure to stress is remarkable. Recent studies in the field point out to the increasing interest in implementing yoga-related techniques in universities (Ph Dondon, Duprat, & Delesse, 2010). A recent study by Ferreira-Vorkapic et al. (Ferreira-Vorkapic, Borba-Pinheiro, Marchioro, & Santana, 2018) tested the response of a group of 60 college professors to a particular yoga practice (*Nidra*) that keeps practitioners on the verge of sleep. The researchers reported that this practice reduced the anxiety levels of practitioners and that proved to be more effective than seated-meditation. They concluded that the easiness and accessibility of the posture of yoga *Nidra* (lying flat on the floor) compared to the seated-meditation posture (more demanding), increased the effectiveness of the method, at least for beginners.

Mindfulness

“All men live enveloped in whale-lines. All are born with halters round their necks; but it is only when caught in the swift, sudden turn of death, that mortals realize the silent, subtle, ever-present perils of life.” (The line).

Mindfulness and attention-related techniques have attracted an enormous interest during the last decades (Brown, Ryan, & Creswell, 2007) due to their ability to positively affect on a variety of human domains as wide as mental and physical health, relationships with others and regulation of the behaviour. The elusive nature of these practices has been channeled and objective measurement of their effect on individuals has been assessed by the

implementation of several standardised protocols, being the Mindfulness Attention Awareness Scale, MAAS (Brown & Ryan, 2003) and the Freiburg Mindfulness Inventory, FMI (Walach, Buchheld, Buttenmüller, Kleinknecht, & Schmidt, 2006) two of the most applied. A comprehensive meta-analysis of quantitative Mindfulness-based studies by Grossman et al. (Grossman, Niemann, Schmidt, & Walach, 2004) concluded that, out of the 64 empirical studies reviewed, 20 met an objective standard of statistical quality and technical relevance and concluded that mindfulness-based stress-reduction techniques positively affect the health of a broad range of individuals.

Mindfulness is highly praised in the organizational research (enterprises) as a way to reduce emotional exhaustion and improve job satisfaction, as shown by experimental studies (Hulsheger, Alberts, Feinholdt, & Lang, 2013). Briefly, workers that are in face of other individuals (as is the case of teachers) are heavily confronted with emotions (Hochschild, 2002) that rise because of their contractual relationship (teacher-learner relationship) and their responses are constricted because of work role (Rafaeli & Sutton, 1987). Then, the three stages of social interaction, that is, 1) evaluation, 2) natural response and 3) suppression of the response according to the role, lead to mental exhaustion and job dissatisfaction, especially when the natural response and the role are dissimilar. Mindfulness is reported to reeducate the two first steps: first of all, it promotes an evaluation that is detached from feelings: objective and non-judgemental. This fact promotes a reduction of the natural response and the subsequent inner tension and sense of inauthenticity that arises from acting in a feigned way (Glomb, Yang, Bono, & Duffy, 2011). In this line of thought, the same authors proved by Magnetic Resonance Imaging (MRI) measurements that the limbic response to negative inputs was quantitatively reduced by the practice of mindfulness techniques (Glomb et al., 2011).

Flook et al. (Flook, Goldberg, Pinger, Bonus, & Davidson, 2013) point out the economic advantages of mindfulness practices for teachers; having in mind the high economic cost of burnout endured by taxpayers, providing teachers with these skills proved profitable: a pilot study with 18 elementary-school teachers revealed that, after an 8-weeks training and an analysis of self-reports and objective measurements (cortisol levels), teachers showed quantitative improvement in burnout symptoms, reported a better focusing-capacity on their tasks and showed improvements in the effectiveness of their teaching function. From a different point of view, Crain et al. (Crain, Schonert-Reichl, & Roeser, 2017) proposed that work life and home life widely intersect and that this intersection-region is especially prone to stress. Then, if stress-management is not effective enough, it can spillover other life regions as night rest and sleep cycle. In order to test this model, they engaged an experimental study with 113 elementary and high school teachers that followed a three-month mindfulness program. Statistical analysis of the results revealed that the participants experienced an improvement of their sleep quality, a reduction in day sleepiness and the consequent improvement on their quality and effectiveness as teachers and a better mood at home, concluding that the burnout and stress symptoms of teachers spread across all the dimensions of their daily life and that their negative effect can be mitigated by using mindfulness-related techniques.

Reiser et al., in an exhaustive study about the implementation of mindfulness-based techniques in groups of teachers (Reiser, Murphy, & McCarthy, 2016) pointed out the relevance of the collective experience, that is, the group itself: the fact of sharing the same kind of difficulties and the sense of not being alone (Yalom, 1995), the opportunity to share their frustrations and to seek support and strength from others (observed in healthcare professionals elsewhere) (Irving et al., 2014), the friendly environment to strengthen their links and to create a community was boosted by the mindfulness practices. Last, but not least, it is noteworthy to consider the contribution of Roeser et al. (Roeser, Skinner, Beers, & Jennings, 2012), who compared an array of different mindfulness-based programs for teachers implemented at a national level (USA) and discussed its positive effect on the development of their professional career by improving a list of beneficial “habits of mind” aiming at the development of durable and supportive relationships with their students and at the improvement of the general environment of the educational centers.

“Where unrecorded names and navies rust, and untold hopes and anchors rot; where in her murderous hold this frigate earth is ballasted with bones of millions of the drowned; there, in that awful water-land, there was thy most familiar home. Thou hast been where bell or diver never went.” (The sphynx).

Relaxation techniques and childs/adolescents

Yoga

Research concerning the benefits of yoga for students explore two main different directions: the first one, in line with the studies designed for teachers, highlights the usefulness of yoga as a way to reduce the stress and improve the sense of well-being; the second, the suitability of yoga to boost the cognitive abilities and the learning skills.

The reduction of stress in students was assessed by Sarkissian et al. (Sarkissian, Trent, Huchting, & Khalsa, 2018) by deploying a two-months yoga program based on the development of proprioceptive and kinesthetic attention abilities in a variety of high-complexity high schools. After quantifying the results by means of several stress scales, such as the Perceived Stress Scale (PSS) (Lee, 2012) and the Resilience Scale (Wagnild & Young, 1993) they concluded that stress was reduced and resilience improved, both in a quantitative way. Another pioneer study, also centered in students immersed in high-complexity environments, reported that, apart from a diminution of stress levels and improved social interactions, a remarkable reduction of the consumption of alcohol was observed for teenagers that had reported a low to medium consumption prior to the treatment (Fishbein et al., 2016). These findings were interpreted inside the frame of the Affective-Behavioral-Cognitive-Dynamic model, which studies the self-regulation processes that come into play in drug abuse (Kenneth W. Griffin PhD, PhD, & PhD, 2006). A preliminary study (no control group) by Butzer et al. measured the cortisol level of second and third-grade students and concluded that the base-level of this hormone quantitatively decreased after the 10-week yoga treatment. The results also showed that the cortisol-level did not significantly change before and after the yoga class, suggesting that the physicochemical changes become more permanent and take root in the psyche of students in a profound way (Butzer, Day, et al., 2015). The growing corpus of knowledge around the

suitability of applying yoga to reduce stress in children led to the deployment of a yoga program in schools in Israel ("Here and Now: Yoga in the schools") in the aftermath of the Second Lebanon War (Ehud, An, & Avshalom, 2010). Previous studies had shown the positive effect of body-mind practices on individuals suffering from post-traumatic stress disorder, as was the case of Vietnam-war veterans and in students after the Kosovo war (Gordon, Staples, Blyta, & Bytyqi, 2004), where the reduction of the emotional impact suffered by the students after a number of bombing episodes was assessed. The study, based on interviews to the teachers, concluded that, although the students (122 children between 8 and 12 years) did not notice any specific change, the teaching staff reported an improvement of the general mood of the class and a better disposition to work under pressure.

"That unsounded ocean you gasp in, is Life; those sharks, your foes; those spades, your friends; and what between sharks and spades you are in a sad pickle and peril, poor lad." (A right whale killed).

The quantitative assessment of yoga practices as a way to improve cognitive capacities is a topic that attracts enormous attention. Nevertheless, the studies that offer quantitative data are sparse and incomplete because of the complexity of the task, although there are qualitative works that deserve our attention. Awareness, attentiveness and forward thinking were reported to be improved by Conboy et al. (Conboy, Noggle, Frey, Kudesia, & Khalsa, 2013) and Dariotis et al. (Dariotis et al., 2016), in a noteworthy study concerning urban areas schools; the researchers confirmed that, after a 16-week yoga course, the students applied the acquired knowledge in a deeply interiorized way: they shared the yoga practices with others, they effectively used breathing techniques at their own pace and when needed to keep calm and counteract emotional difficulties. Besides, both teachers and students reported the course to be a very positive experience in a number of different aspects, specially in those concerning behavioural and learning issues.

Mindfulness

So, when on one side you hoist in Locke's head, you go over that way; but now, on the other side, hoist in Kant's and you come back again (...) Oh, ye foolish! throw all these thunder-heads overboard, and then you will float light and right (The sperm whale's head).

Mindfulness proposes four general lines of action, all of them deeply interlinked: the ability of sustaining attention on the present moment, being able to self-monitor and detect the erratic movements of the mind (rumination), being able to withdraw attention from distracting objects and the skill of choosing a new attention object and stick to it (Bishop et al., 2004). Attention was assessed to play a key role in the development of individual behaviour from childhood and it is deeply embedded in a network of neuropsychological functions that individuals use everyday (R. A. Cohen, 2014), such as setting goals, taking decisions and managing emotions (Lezak, Howieson, Bigler, & Tranel, 2012). Even more: deficits in attention have been shown to have an impact in the development of a variety of behavioural disorders as bullying (C. Hughes, White, Sharpen, & Dunn, 2000), attention-deficit hyperactivity disorder, autism spectrum disorders and, consequently, in the academic performance (Blair & Razza, 2007).

Several attempts to review the literature concerning mindfulness and its ability to improve the cognitive skills of students were conducted, although with limited success because of the low representativity of the proposed experiments (Chiesa et al., 2011). With the goal of providing high quality, reliable studies, Mak et al. (Mak, Whittingham, Cunnington, & Boyd, 2018) filtered the existing data and summarized the results of 13 experimental quantitative studies that met high standards of experimental and statistical quality. The review suggests that mindfulness is a promising direction in order to improve the attention of students but that higher quality studies are needed to obtain solid results: firstly, the sample populations are small; secondly, there is a lack of consensus on the use of a standardised protocol (an attempt could be the Mindfulness-Based Stress Reduction protocol, MBSR) (Kabat-Zinn & Hanh, 2013); thirdly, the nature of the mindfulness course itself is subject to a variety of tendencies and different focus of attention, mainly behaviour, posture and attention, so the comparison between the outcomes is uncertain.

As you can see, mindfulness is a hot topic in the field of teaching and, because of that, the quality and span of the available literature is diverse. In a sense, it is an old story: body-mind techniques always had a rough time when entering the rational, scientific world since they split several centuries ago. Nevertheless, enormous efforts are being done in order to quantify and measure responses in a reliable way.

Carl Sagan said “it pays to keep an open mind, but not so open your brain falls out”. Will we be able to find an equilibrium between the ancient and the new, between philosophy and science? Only time will give us the answer.

Yoga? Mindfulness? Two sides to every story

“Though I am but ill qualified for a pioneer, in the application of these two semi-sciences to the whale, I will do my endeavor. I try all things; I achieve what I can.” (The prairie).

The quest of Western world for regaining a certain degree of equilibrium between body and mind after several decades of extremely fast social changes and skyrocketing demands at an individual level, has led to a remarkable search for a different way of perceiving the world. Eastern cultures, perhaps because of its exotic nature, have rendered the raw material for a plethora of alternative visions of reality. In the next lines, and just for the sake of clarity, my intention is to provide some hints about the main roots from which these techniques have flourished.

Yoga is a psychophysical technique that was developed between 5000 and 7000 years ago in the region of actual India. responding to the sanskrit word *yukta* (union) it proposes a cosmological vision where the conscience of individuals, thought to be distracted by emotions and senses, remains stray and bound to the affliction/happiness wheel. As a practical method, it proposes specific steps to advance towards the clarity of conscience and to the detachment of human passions. Along the millennia, these syncretic wisdom was endlessly reshaped as a response to social and cultural changes and was finally crystallized by the philosopher Patanjali (500-200 B.C.E.) in the seminal psychology work Yoga Sutras (Iyengar & Menuhin, 2018), where the analytical method to reach a clear perception of reality

was summarized. Nevertheless, yoga kept on changing and finally reached Western world from the hand of Krishnamacharya (Mohan, 2010), who adapted the classical tradition (almost entirely based on breathing and mental techniques) by including practices from swedish “light-gymnastics” method. Nowadays, yoga keeps on evolving and reshaping itself into a variety of expressions that stretch its limits almost to an unbearable range. Nevertheless, and disregarding with a smile the most fashionable and selfie-oriented deviations, yoga relies on three basis: corporal movements to increase the perception of the body and its posture, breathing techniques to expand the internal cavities and relax inner muscles as the diaphragm and mental practices that aim to the observation of the proper emotions and recurrent thoughts.

Mindfulness is a modern term that refers to a specific part of the Buddhist psychology, although it shares plenty of concepts with a variety of philosophical traditions (ancient Greece) and also with modern Western movements (existentialism, naturalism). The very human existence becomes central and the main activities of the mind, that is, awareness and attention, their cornerstones. Awareness is considered to be the registration of the perceived stimuli coming from the senses and the proper mind activity so, in a sense, awareness becomes the tool through which reality is perceived (Thera, 1973). Now, when the stimuli is strong enough, attention turns on and we take notice of something happening. Once stimuli are triggered, emotions are raised and judgement comes into line. Then, “good” or “bad”, “suitable” or “unsuitable” tags get stuck to the stimuli. This adaptive, natural response has a drawback: cognitive circuits are fired in a certain way every time a similar stimulus is perceived. This is an advantage in terms of processing-speed and rapid response. Unfortunately, life flattens and reality is perceived in a very shallow dimension. Besides, this process is prone to spiral into stressful experiences which are triggered even if reality does not pose an objective threat. According to this, mindfulness proposes a more open, fresh contact with reality that is not weighted by past experiences. The practitioners learn to be “present” and to experience reality as it is by detecting and neutralizing the automatic responses of the mind towards stimuli (Olendzki, 2005).

As it can be seen, both yoga and mindfulness are nothing but two sides of the same coin: methods to regain the sense of presence, techniques that aim to reduce the excessive mental movement and rumination processes, ways to perceive reality in a simpler, more meaningful way. Detached from any kind of cultural tradition or religion, they are deep and powerful hygienic techniques that consider individuals from a holistic point of view and that help us to keep a reasonable distance from the robotization of human beings.

FROM THEORY TO PRACTICE: APPLYING RELAXATION TECHNIQUES

Relaxation techniques for teachers: a five micro-session challenge

The practical aim of the present project is to propose a simple, ready-to-use, relaxation course that can be easily implemented in any educational center (elementary, middle, high school or university). Having reviewed a variety of techniques in the previous section, namely mindfulness, yoga and body-mind techniques, our goal is to offer a course that gathers the core knowledge of all of them in order to offer a proposal that is detached from any cultural or religious background, that can be easily assimilated and that offers regulation options to adapt to all kind of teaching staff, independently of its age, health condition and mobility. The fact that the proposed practices can be done with casual clothes, with shoes and without any kind of sportive material (no mat is required) is paramount, as the deep goal of the course is that the participants learn how to apply it in their daily lives, anytime, anywhere: dragging relaxation techniques out of the gym or the yoga center and making them available in the workplace is the way to render them useful and to integrate them in the professional life as another important skill to be acquired.

The problem of time

The life of high school teachers is busy and one of the challenges of the project was to find a gap in the working week to impart the course. After several meetings and much talking, it was decided to place the course after lunch before the weekly meetings that teachers attend to during monday afternoon, as it was considered to be the moment where more teachers could be attracted by the course.

Less is more (and if not, it is usually the only way)

The technical challenge of this project was to condense a meaningful and progressive course that included the five main aspects that literature considers to be the cornerstones of the relaxation work in the context of stress relief: breathing techniques, stretching movements, self-perception, self-observation and group work. Several studies have explored the effect of low-dose relaxation practices in the working environment (Klatt, Buckworth, & Malarkey, 2009). Just for the sake of giving a time-frame, the standard mindfulness course spans 26 hours (Kabat-Zinn, 1982), while low-dose courses have proved to be beneficial, specially in the context of individuals suffering from psychological distress and who, lacking the necessary time to follow a more comprehensive course, stick to “express” options. The validity of these shortened versions has not been tested to the date in terms of medical or biological outcomes (Davidson et al., 2003).

Having in mind that the course proposed in this project is 75 minutes-long, it would not be reasonable to say that it can promote long-term changes on the participants. In fact, this is not our goal; the nature of the present project, then, is to promote a certain awareness, to show and to exemplify which is the nature of the relaxation routines and to awake a certain

interest on the participants so that they can pursue longer courses on their own or still better: to organize a full-year relaxation course on the high school. As a secondary objective, we want to assess which is the response of the teaching staff in face of the relaxation course proposal and which is their commitment level along the 5-week course.

Initial survey

With the consent of the high school principal, a proposal was sent to all the teaching staff (Annex I). 21 out of 40 individuals showed their interest in attending the course. In order to know the opinion of the participants towards the topics treated in the present project, an initial survey was sent to them (Annex II). The survey comprised 3 main blocks:

- First block: students attention and classroom management (7 questions)
- Second block: management of teachers' stress level. Relationship between teachers' stress level and students' stress level (8 questions)
- Third block: relaxation techniques and competency-based education (6 questions)

10 individuals completed the initial survey (a summary of the results can be found in Annex II). Due to the fact that both the number of participants and responses is small, the outcome of the survey will not be statistically treated to infer any conclusion. Nevertheless, it is informative of the tastes and tendencies of the participants and can provide some information in a qualitative way.

The five sessions

Week #1. Working on the inner sense of verticality

In order to regain the sense of presence, the feeling of being "here" and experiencing the "now", a plethora of techniques can be used (Brown et al., 2007) (Feuerstein & Wilber, 2001). Nonetheless, one of the easiest to understand and to practice, specially for those who are not used to relaxation techniques, is to focus the attention on the body. As a matter of fact, all along the 5 micro-sessions, feeling the body will be the main anchor to focus our attention and to stop the rumination processes..

The first session focuses on two key points; the first one is the silence, the sense of inactivity and rest. Prior to any corporal or relaxation technique it is necessary to reduce the stimuli that excite our senses and that are processed by our mind. To do so, closing the eyes is an excellent option, as well as focusing the attention on the inner sense of posture. In this point, there is a concept that should be clarified in order not to mislead the reader; all along the 5 micro-sessions an special kind of "attention" will be practised; no effort is required, no cognitive processes are involved, no evaluation of the results or the processes will be held: the attention we talk about is just being there, with as feeble a rationalizing mental activity as possible: a huge task for us, Western beings!

The second point is stretching the back muscular train that goes from the neck to the heels. Teachers, as well as so many professionals, spend long hours sitting in front of a computer or in front of a pile of papers on a desk. Because of that, the back train shortens and tension

builds up in the posterior part of the body. Releasing part of this tension is something mandatory in order to regain the sense of wellness that is necessary to face such a demanding task as that of teachers. The session is summarized elsewhere (Chart 1 of Annex 3).

Week #2. Neck, shoulders and the small of the back: the three hot spots

Session #2 provides simple, ready-to-use strategies that can be applied anywhere: sitting on a chair at your desk, after a difficult and demanding class or when feeling slightly under the weather. Learning to release neck, shoulders and lumbar region tensions are hygienic practices useful for a lifetime. Nevertheless, the veiled goal of day #2 is: can I connect the awakening of tensions on my back with the way I experience conflicts in class? Do I feel pain in my neck just prior to a meeting with the principal or when I have to move to a different high school? Do I become aware of the connection between the emotions I feel and the response of my body? The session is summarized elsewhere (Chart 2 of Annex 3).

Week #3. How do you breath?

Breathing is a natural process we mainly remain unaware of. Nevertheless, we all experience a short and rapid breathing when we are afraid and a long and deep one when we are profoundly relaxed. Session #3 proposes simple techniques to explore the full span of respiratory regions that we have (generally) forgot about. Again, the real goal of this session is to realize the connection between the stress level we experience and the way we breath. This way, the practitioner will be able to anticipate a lurking stress condition by observing the quality of his/her breathing. The session is summarized elsewhere (Chart 3 of Annex 3).

Week #4. Have fun! Stretchings in couples

We humans are incurable social beings. The contact with others, especially in relaxed and playful ground, promotes a deep sense of wellness. Building a strong and amiable relationship with the rest of the teachers is paramount to endure the harsh moments at work. In this sense, the combination of corporal techniques and direct skin-to-skin contact with others is the core of session #4. The sessions is summarized elsewhere (Chart 4 of Annex 3).

Week #5. Feeling enraged or moody? Try a soothing breathing technique.

All the knowledge sketched out up to now provide us with tools to anticipate or keep at bay a stressful situation. Nevertheless, when we are in the center of the gale, we need to learn how to detach from ourselves to regain a vantage point from where to observe ourselves in an objective way. The sense of silence, the awareness of the posture and the soothing effect of complete breathing cycles point toward that challenging objective. The session is summarized elsewhere (Chart 5 of Annex 3).

Final survey

Out of the 21 teachers that engaged the course, 5 of them reached to the end of the five micro-sessions. They were asked to answer a final survey that aimed to reveal the subjective differences experienced by the participants because of the relaxation course:

- First block: students attention and classroom management (6 questions)
- Second block: management of teachers' stress level. Relationship between teachers' stress level and students' stress level (5 questions)
- Third block: relaxation techniques and perceived skills (4 questions)

The 5 participants completed the survey. The questions and the analysis of the answers can be found in Annex IV. Again, due to the small number of responses, the outcome of the survey will not be statistically treated to infer any conclusion.

There is something remarkable that can be extracted from the experience; 21 teachers engaged in a 5 sessions of 15 minutes (1 session per week) in a time frame where they were obliged to remain in the center. Just 5 of them finished the course. I would like to propose two speculative explanations for that; the first one concerns the quality of the training and the skillfulness of the teacher, which I humbly recognize to be more than limited. That, of course, could account for the desertion between the ranks of participants. Although this first assumption represents, for sure, the lion's share of the more-than-mild long-term engagement in the proposal, let me guess a second cause: teachers are overwhelmed with stimuli. In fact, they fly from class to class and they experience the uneasy certitude of not being in charge of their own time. This feeling is pushed away by doing more things, by rushing more and more and by engaging new experiences (as the relaxation course) just for the sake of moving. Nevertheless, the driving force is not a sincere interest but the vicious circle of stress, which is the enemy of commitment. How can we teachers be robust and trustworthy models for our students, how can we ask them to be responsible and to engage themselves in their own long-term education if we are not able to finish a course that spans 75 minutes in 5 weeks? A question as uncomfortable as the reading of Joseph Conrad's masterpiece (Conrad, Knowles, & Simmons, 2018).

Relaxation techniques for students

A vast array of studies deal with the hot topic of school climate and how to improve it. Needless to say that, in order to be engaged, this issue deserves a whole project and that this is not the goal of the present one. Nevertheless, and as a way to introduce the suitability of the practical application of relaxation techniques during the class time, I would like to draw your attention towards a recent work from Murillo et al. (Murillo, Garrido, & Hernandez-Castilla, 2016), who summarized the 10 steps towards a fruitful teaching. 3 of them are of remarkable importance in the present discussion. Firstly, the climate of the class: a tidy environment, positive, warm, full of affects, where the relationships between students and students-teachers are effective and where satisfaction and constructive attitude are welcome. Secondly, the ability of the teacher to offer a variety of activities and to introduce

and motivate compelling experiences. Thirdly, the management of the class and the setting of daily routines that contribute to the centering of the attention and to the creation of a safe and welcoming environment. The question is: can yoga and mindfulness have an impact on these factors when applied as a daily routine in the classroom?

The long ride to calmness

The life of youngsters is complex and the number of stressors they face both in the family and in the school environment are remarkable and have widely changed during the last decades (Ryan-Wenger, Sharrer, & Campbell, 2005). Having in mind that many of them are the seed of forthcoming psychological disorders and that there is prove that young age is the moment when a vast number of adult mental conditions sprout from (Kessler & Wang, 2008), there is social concern about the necessity of training childs and adolescents into a number of skills that can provide them with the tools that are necessary to cope with stress and emotional management and self-regulation. In fact, this is not a new idea: the first Western attempts of giving students a global education that went further than the academic skills, that is, providing mental, physical and emotional tools, date from the onsets of the XXth century (Terman, 1914). And while there is strong prove that a holistic vision of education that encompasses both physical and cognitive dimensions in a wide perspective is beneficial to students, there is a rock-hard reluctance to implement it (Elias, 1989). Sadly enough, education provides the necessary skills to insert individuals into the job market but denies them the paramount skills to manage the increasing stress level that this very job market promotes: a bad combination in terms of human well-being and mental health (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011).

Yoga and mindfulness in the school environment have been a matter of study during the last years and the number of published papers keeps on increasing. While there is not strong quantitative evidence of the effect of these techniques on the students, mainly because of a lack of standardised methods and large-population studies, there is qualitative evidence about their usefulness in terms of boosted mind-body awareness, emotional self-regulation and physical fitness (Hagen & Nayar, 2014), as well as the general well-being and mood quality (Pascoe & Bauer, 2015).

Key points: the needs of youngsters

In order to reduce the field of action and to center the topic of this part of the project, I would like to focus on three of the main aspects that yoga and mindfulness have proved to be beneficial for in the classroom context, namely resilience, posture (musculoskeletal conditions) and attention. Let us review them one by one.

Resilience is a concept deeply related with the field of mental health. In the words of Henning et al., “resilience is finely entwined with the experience of disequilibrium” (Henning, 2011) and to the fact that human beings are complex systems that undergo changes after changes. Nevertheless, we individuals experience life as a sequence of static, equilibrium plateaus and we show strong reluctance towards the changes that, unfailingly, takes us to new equilibrium plateaus. From this sequence of events that form human life, we individuals develop a certain adaptation skill that helps us to navigate between the transition lapses,

that is, resilience. At the same time, we keep on experiencing a certain concept of “me”, which is a remarkable achievement, “given that life can also be seen as a journey dominated by dramatic shifts, a process of repeated births and deaths” in the words of Torbert et al. (Torbert, 1973). This ability to adapt again and again to the changes of life is crucial to be developed during childhood and many studies have been devoted to the topic (Resnick et al., 1997). In order to quantify this elusive parameter, different methods were proposed and reviewed (Windle, Bennett, & Noyes, 2011). In line with the goal of the present project, Gard et al. (Gard, Noggle, Park, Vago, & Wilson, 2014) published promising neuroscientific results that presented yoga as a technique that can improve resilience, findings also supported by the field-studies published by Sarkissian et al. (Sarkissian et al., 2018).

Musculoskeletal conditions are common in Western societies; symptoms like soreness, back and neck pain and numbness in different parts of the body are usual complaints. Interestingly, while some of these conditions are related to repetitive movements derived from specific workplaces, many others do not show any clear underlying reason (Carmona, Ballina, Gabriel, & Laffon, 2001). Among others, psychological stress has been proved to be one of the factors that promote musculoskeletal disorders in adult population (Bernard, Sauter, Fine, Petersen, & Hales, 1992) and also among adolescents, where it is a possible response against the emotional stress arisen because of academic burden (Szer, 1996). Further studies pointed out depression and sleep problems as the underlying causes of neck and widespread pain in school students (Mikkelsen, Sourander, Salminen, Kautiainen, & Piha, 1999). As previously cited in the present project, both yoga and mindfulness techniques have proved to reduce stress levels and to increase the postural awareness of students (Grossman, Niemann, Schmidt, & Walach, 2004), facts that prove to be paramount in order to reduce the incidence of musculoskeletal non-specific disorders and to presumably promote the onset of personal skills that will be helpful to cope with the challenges of adult life.

Attention level is one of the cornerstones when it comes to consider a fruitful and meaningful education (Fleming, Harachi, Cortes, Abbott, & Catalano, 2004). While it is a human skill, it is necessary to educate it and to promote it. In a classroom environment, factors as the emotional support of the teacher, the level of involvement of the parents and the classroom management have proved to contribute to enhance the attention level of the students. The direct correlation between inattention level and a worsening of academic outcomes was experimentally studied by Sayal et al. (Sayal, Washbrook, & Propper, 2015), who established a direct link between the attention level at age 7 and the academic outcomes at age 16, while also tackling the more acute effect observed on students presenting attention-deficit/hyperactivity disorder (ADHD). A meta-analysis comparing the feasibility of applying yoga and mindfulness techniques to mitigate the effect of ADHD reported a statistically significant outcome in terms of improved attention level (Chimiklis et al., 2018). As already discussed, both yoga and mindfulness techniques are fully based on the development of the attention as a central skill for the development of individuals (Brown et al., 2007). Nevertheless, and up to date, although both techniques present a strong potential in this line (Peck et al., 2005), there is no solid corpus of quantitative works that demonstrate

the effectiveness of yoga and mindfulness as reliable ways to increase the attention level of students.

Practical proposal: the 10-week program

In a recent review paper, Butzer et al. (Butzer, Ebert, Telles, & Khalsa, 2015) explored a variety of yoga and mindfulness programs (36) deployed in the schools and high schools of the United States that encompassed the four basic cornerstones of mind-body techniques: physical postures, breathing exercises, relaxation techniques and mindfulness practices. They classified the reviewed programs in two main groups: the first one, those offering in-classroom practices: short exercises inside the classroom at the end or at the beginning of a specific class; the second one, full yoga practices: 30 to 45 minutes-long full sequences practiced at open air or inside a gym. They also identified the programs that require a qualified yoga teacher to be correctly conducted (15) and those where this is not required (21). The span of these interventions is not clearly stated.

In the present project, an in-class intervention for 2nd grade ESO students is proposed. The aim of the presented intervention is three fold, in line with the recently discussed needs of youngsters: to improve body self-awareness (better posture), to propose techniques to boost attention and to practice exercises that develop personal resilience in a broad sense. Having in mind that this program focuses on simplicity, teachers do not require any specific yoga or mindfulness instruction although, of course, it is always welcome.

A one-week routine with two short daily practices is proposed (fig. 2). The specific details of the program can be found in Annex VI charts. The span of the whole program is 10 weeks, along which the weekly routines will repeat: yoga and mindfulness exercises take a number of repetitions and a certain time lapse to be fully acquired and to create a habit that the students can use, both for their academic adventure and also for their personal life.

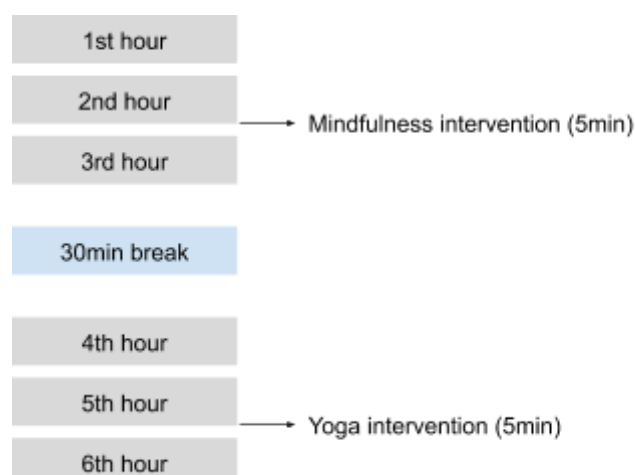


Fig.2. Daily timetable of the highschool and position and span of the proposed mindfulness and yoga daily routines (at the end of the 2nd and 5th hours).

Assessing the program: a feasible approach

The quantitative assessment of the usefulness of yoga and mindfulness programs, that is, the impact on a number of a set parameters (academic performance, class management, general mood, quality of attention, etc.) has proved to be difficult to measure, mainly because of a lack of standardized tools, the difficulty to isolate the effect of the program from the rest of changes experimented by a group of students during a whole term and the number of assessed individuals (Khalsa & Butzer, 2016) (Burke, 2010). Nevertheless, and as a first approach, the present program proposes to keep a control group where the program is not deployed and another that follows it for the whole term. A Brief survey is performed to all teachers that are in contact with both groups at the beginning (Annex V) and at the end of the term (Annex VII). Our hypothesis is as follows: both groups will experience the same changes along the term except those concerning the present program. This approach, simple but very limited in terms of rigour, would provide preliminary evidence for the feasibility of the program.

COMPETENCY-BASED EDUCATION AND RELAXATION TECHNIQUES: A FUTURE TOGETHER?

Holistic education and its connection with basic competences

"If then, Sir William Jones, who read in thirty languages, could not read the simplest, peasant's face in its profounder and more subtle meanings, how may unlettered Ishmael hope to read the awful Chaldee of the Sperm Whale's brow I but put that brow before you. Read it if you can." (The nut).

The implementation of yoga and mindfulness in education programs is an attempt to promote a wider vision of education where different perspectives of the human being are taken into account in order to prepare him/her for the world to come and for the phenomenal changes that we all will have to engage in the fields of team-working, empathy development and information management. Nevertheless, and despite the supposed modernity of these ideas, they are not new at all. Terman et al. (Terman, 1914), in a seminal work published back in 1914, reviewed a series of factors that affect the education quality of children, taking into account the quality of their breathing, their nervousness, the postural hygiene and highlighting the need to consider both mental and physical skills so as to reach a fair development. In fact, the whole XXth century is interspersed with a variety of attempts to rethink the educational system, as is the case of the democratic schools flagshiped by Summerhill (Neill, 1960), or the holistic education movement. Because of its deep connections with yoga and mindfulness and the remarkable number of traits that this tendency shares with competency-based education, and of course because of a personal choice, may I use it to exemplify the feasibility of being used as a model to link the old and the new, the body and the mind and to introduce the always uncomfortable concept of spirituality and transcendence in the education field. But we are here to explore the uncomfortable and follow the track of the Pequod's crew, who engaged an adventure side by side with captain Ahab for the quest of the Leviathan. Let's hope we finish in better terms with Nature than them.

Holistic education was born during the 80's in the United States as a response to the standardised education model (Miller, 1992) and profited from the humanistic influences of Rousseau (Rousseau, 2010) and Krishnamurti (Krishnamurti, 2003) between many others and influenced the thought and writing of an array of intellectuals and writers as is the case of Kurt Vonnegut (Vonnegut, 2007). Claiming to be not just an educational model but a change of paradigm, holistic education is a multi-branched, complete approach to the development of children that includes, among others, feminist perspectives (a deep sense of caring, both for oneself, the others and the environment (Bergman *, 2004); an egalitarian structure of respect) (Eisler, 2017) and a deeply-rooted concept of humans as a part of a whole ecosystem with which it maintains profound links (Orr & Orr, 1992).

The core of holistic education, as expressed by Rudge et al. is to "nourish the inherent possibilities of human development" (Rudge, 2008) by cultivating the physical, intellectual, emotional and spiritual dimensions of the human being. Interestingly, and because of a

cultural bias, Eastern holistic schools tend to emphasize the quest for the inner “self” by means of a transformation process fueled by right education, using both meditative techniques and the development of artistic skills; at their turn, Western holistic schools highlight the path that leads students to reveal their true potential by means of “experiencing” the world. Nevertheless, both Eastern and Western schools coalesce in the sense that both center their action in a certain kind of spiritual predisposition towards two fundamental questions: “Who am I?” and “Why am I here, which is the purpose of my life?”. The remarks of Gang et al. come in handy so as to summarize the holistic approach in 4 basic pillars (Gang & And Others, 1992), the cornerstone of which is “to prepare students for life in the 21st century, emphasizing a global perspective and common human interests”. More, Flake et al. (Flake, 1993) include a number of basic principles of holistic education that are remarkably in line with those proposed by the basic competences system that emerges from the Lisbon Strategy (Pépin, 2011): the uniqueness of each student and his/her inherent and distinct needs, the fact that teachers are not providers but facilitators of knowledge, the necessity of unfolding real choice for students so as to let them find their own formative path, the importance of democratic values and the deep need to rethink the relationship between we humans and the environment to face the challenges of the XXIst century. Besides, holistic education stresses the necessity of integrating the learning experience by erasing the lines between subjects (transversality, multidisciplinary), the cornerstone position of cultural integration and inclusion and the mandatory approach towards an educative experience that encompasses both individual/team work, analytical/intuitive skills, body/mind performance and development.

“They were one man, not thirty (...) all the individualities of the crew, this man’s valor, that man’s fear; guilt and guiltiness, all varieties were welded into oneness (...)” (The chase - second day).

Holistic education, basic competences and relaxation techniques

Basic competences system points towards a wide-range educative span in terms of skills. Being classified in four main groups (communication, methodology, personal and coexistence), they point towards an educative model that claims to be global, holistic in a certain sense. The ultimate reason why the competency-based model is urged to be applied in Western World societies remains a hot topic: while some people claims that this new paradigm tries to erase the already-crumbling industrials-era education models devised to “create” disposable, interchangeable workers (Serafini, 2002), others raise the alarm by maintaining that new directives aim at shaping the citizens of the forthcoming liquid society that will feed the silicon valley oligarchies with cannon-fodder: people that will always be ready to learn to adapt to new jobs, that will be deeply-encoded with the necessity to become “employable” and to consecrate his/her time to meet the needs of the market, to be innovative and, finally, to become a disposable item (Bauman, 2000). Nevertheless, although it looks like a compelling topic to discuss about, *revenons à nos moutons*.

At the end of the day, it is clear that the world to come will be a busy one; we all face an increasing amount of information, of change, of instability. Some gurus even claim that new generations are better equipped to engage the digital world and that their multitasking performance comes as an in-board genetically acquired upgrade, although no empirical

prove is reported of that (Kirschner & De Bruyckere, 2017). Students will have to face a world where information will be ubiquitous, a society that will ask of them to be able to distribute their time in a variety of tasks that will be presumably oriented towards the struggle to become useful and to provide skills or services that machines will not be able to cover (M. A. Peters, 2017). This multitasking, high-speed scenario is already claiming its prey: the number of attention-deficit-disorder-like cases have remarkably increased during the last years, presumably because of the overload of messages and tasks, fact that ends up with a reduction of the individual productivity (Hallowell & Ratey, 2005).

All along this project, positive results about the capability of mindfulness and yoga to reduce the stress level of individuals and to focus their attention have been presented and, although the vast majority of studies are qualitative, they pave the way towards the possibility of being integrated in education as another regular tool. In fact, competency-based education considers skills that go further than the content of subjects and highlights the importance of the individual and the team. In this sense, both mindfulness and yoga propose the concept of spirituality in a way that should be disconnected from any worship practice, that is, a secular interpretation of the term. Some authors propose that the liquid society mainstream, mainly focused on results and performance, should be counterbalanced by the nurturing of spirituality in education, being “which is the purpose of my life” and “why am I here?” two of the main pillars for individuals to build themselves on (Hay & Nye, 2006). In order to develop this inner skill, attention and self-awareness are required, not only to create this intimate contact with oneself but to realize that the requirements of the outer world are not always in line with inner values and needs and that it is mandatory to apply a critical thinking from the detached vantage point that mindfulness and yoga promote. In a sense, and this is just a personal point of view, the final goal of education is to confront the individual nature with the outer world: to contrast the inner beliefs with the outer needs, to balance the messages that come from inside and those that thunder outside, to realize that the inner movement is slow and that the outer world changes fast according to a set of values that are not always in line with human nature but with human creations, that is, politics, markets and the struggle for power (Marcuse, 2002).

The enormous amount of information citizens of the future will have to face asks for the development of an elusive skill, the name of which has been eroded and wearied by religions, political powers and history. A skill that has been shaped by science and technology in the sense that human knowledge has helped to define its borders and to concentrate its meaning. Of course, this last bastion of what it means being human will asymptotically be relegated to a singularity until we become a different species or the machines become human. Nevertheless, and while we wait for the rupture point to come (Kurzweil, 2010), relaxation techniques, far from being a fancy new-age tendency or another large mass consumer product, provide humans with the opportunity to regain a deep contact with the inner sense of authenticity. In the future we will be able to prove if these techniques quantitatively improve (or not) the performance of students; if these techniques reveal to be fruitful (or not) in terms of boosting the cooperation quality. The question is: will we be able to prove if they help us to realize that we are humans and not machines?

Looking inside: the (unsurmountable?) taboo

Science and philosophy began their journey as two methodologies to give responses to the needs of human beings. Unfortunately, they split in bad terms and resentful feelings coming from both sides compartmentalized and isolated their fruitful legacy. Far from trying to find an agreement between them, in these lines I would like to offer a neutral playground where, perhaps, may we widen our vision and approach to the world.

In order to briefly outline this love and hate relationship, it may be handy to go back in time. Hebrew tradition considered that humans had two components: a psychophysiological unit that comprised not only the body but a variety of functions (*basar*) and a psychic unit (*nefesh*) (Mittleman, 2015). Greeks proposed several models, but the main one was the dual-nature of human being, where an immortal soul who has access to ideas, to the essence of existence and that drives action and desire, was imprisoned in a mortal body. This dual cosmology was also shared by hindu traditions, but with a very interesting twist: they proposed that creation was a deployment of a basic matter (*mulaprakriti*) that formed the cosmos in a large sense, comprising not only the body but the psychic processes, including the “I” concept (Feuerstein & Wilber, 2001). Besides, a deeper reality (*purusha*) perceived the external world through the distorting glass of the “I”. The refinement of their cosmology consisted on the fact that hindus considered that self-consciousness belonged to *purusha* but not to the “I” concept. Nevertheless, it was Descartes the philosopher and scientist that established the basis of our Western traditional concept of human being: he slashed the individual into two parts: on one side, the matter (*res extensa*), that can be assessed in a mechanistic way by applying scientific tools; on the other side, the mind (*res cogitans*), where the “I” concept becomes powerful as the throne of the reason (Clarke, 1979).

From here onwards, reason and objectivity became the cornerstone of knowledge. Nevertheless, there were voices that, centuries later, revised that concept, as is the case of Husserl (Depraz, 2001); he claimed that subjectivity is the essence of we humans. Our existence develops around the certainty of being “subjects”, that is, of having conscience of ourselves. Husserl proposed that, in fact, objectivity is not truly possible: the self-consciousness and the conscience of being in the world is embedded in the basis of no matter what measurement, appreciation, experiment. In other words, the objective measurements are validated by a jury, but that very jury has been chosen by the subjective self. In this train of thought, Husserl proposes the “human exemption”: humans as the measurement of all things, placed beyond the reality of the world because humans are the place where the world appears as it is. As you can imagine, this cosmovision, although in line with Freud and the fact that he removed reason from the center of the scene, was questioned by darwinist thinkers as Schaeffer (Schaeffer, 2009) who, at his turn, has proved to be (at least partially) right about the evolutionist point of view with which he explained the nature of human beings: we, as the colonies of wild rabbits, are incapable of controlling our growing numbers until the environment is destroyed and famine takes control.

Last decades have furnished us with relevant data that rely upon the achievements in genetics (Nogués, 2011). We humans share almost all our genome with the rest of primates; nevertheless, genes are not the only responsables for what we are: cerebral structures and glial cells seem to play a tremendous impact on our essence as species (Taylor, 2010). In fact, some scientists propose that this differentiation from the rest of our relatives was promoted by an ever-growing auto-domestication process that led us to reshape ourselves by selecting specific linguistic and social capabilities (Taylor, 2010). In a sense, education in a deep level has been part of us from the beginning. This selection of desired group characteristics could have been the seed that led us towards the emergence of the “I”. Goldstein et al. (Goldstein, 1999) defines “emergence” as “the apparition of structures, models and characteristics that are new and coherent during the processes of organization in complex systems. In fact, in the words of Ricard Solé, “the conscience emerges from the complexity of glial and neuronal networks” (Solé, 2009). It is clear that a range of psychic capabilities are present in animal world where stimuli-response systems are developed. Nevertheless, and in the terms of Duncan et al. (Duncan, 2010), we humans have a more sophisticated system called multiple-demand pattern that makes feasible to experience mental states of high quality.

In this new context, the “I” is explained as a subjective and qualitative synthesis of the conscient part of the mental experience. In other words, experiences lie disconnected inside the neural networks until assembled in a central position by the concept of “I” (Linás, 2003). Being said that, the “I” is the cornerstone of the human experience and it has been treated in a variety of ways in order to provide solace to human beings. Some tendencies, based on Eastern traditions, try to dissolve it in order to take distance from the hardness of life. Others, as Western capitalism, build strongholds where the narcissist “I” inflates while, at the same time, remains in fear of others. The deepness of the “I” concept has taken hundreds of thousands of years to develop and to adapt to the slow but steady changes that humans have endured. Unfortunately, the rhythm of nowadays society and its constantly growing renewal-rate and complexity puts the stability of the “I” in danger. What is yoga and mindfulness but a strategy to promote a strong and healthy “I”, that can help our students not to lose their sense of individuality without losing their connections with others? Which is the purpose of education but to promote open-minded individuals that know that there is always time to reflect and to take distance from the impulsivity that preconices the marketing strategies? Which is the purpose of education but to find spaces to ask ourselves “who am I?” and “which is my purpose?”

Which was the destiny of captain Ahab but to meet the White Whale?

“Would now the wind but had a body; but all the things that most exasperate and outrage mortal man, all these things are bodiless (...)” (The chase - third day).

CONCLUSIONS AND FUTURE WORK

The conclusions of this project are organized to follow the three main objectives proposed at the beginning of the manuscript:

- The literature regarding the positive effect of relaxation techniques on the attention of students and on the class management has been reviewed: while the vast majority of studies show promising results, further works are required in order to provide quantitative evidence. The present project proposes a practical 10-weeks intervention for 2nd ESO classes that can be performed by teachers with a minimal training and that comprise both mindfulness and yoga-related techniques. This intervention has not been taken to practice.
- The literature concerning stress at work has been reviewed, specifically in the context of education. Scientific studies reveal that the high turnover rate of teachers is deeply related, not only to the increasing sense of accountability and the multiple tasks that they are required to perform, but to their inner (subjective) experience. The Demands and Resources system has been reviewed and factors as social resourcefulness, self-acceptance and the ability to maintain perspective and to anticipate forthcoming events have been highlighted as paramount skills to be developed by teachers. The positive effect of relaxation techniques to boost these abilities has been discussed and, although scientific studies lack in number and quality, remarkable efforts are being done in this direction. The link between teacher's stress and students' stress has been reviewed and discussed. A practical intervention of 5 micro-sessions has been implemented in a high school and the results, although not representative due to the lack of population, are prospectively positive.
- The links between competency-based education and the use of relaxation techniques have been discussed by using holistic education models as the "missing link" between both. The fact that competency based education focuses, not only on the content but also on the global development of the individual is deeply aligned with the values promoted both by yoga and mindfulness. In this sense, a brief metaphysics discussion about the direction of education as a whole is included at the end of the chapter.

This project opens a humble door towards the implementation of relaxation techniques in secondary education. In order to obtain quantitative and representative measurements of the validity of the proposed techniques both in the stress reduction of teachers and students, a whole year practical project would be the next step to perform. In this sense, there are several factors that would be interesting to assess: the first, the almost entire lack of men between the ranks of teachers interested in these techniques. The second, the sense of embarrassment and shame that individuals (specially adults) experience when confronted with relaxation techniques. To progress in this direction, further anthropological studies should be engaged to study the taboos that surround these practices.

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ANNEXES

Annex I. Course proposal (mail to the teaching staff)

Bon dia a tots i totes,

em dic Gerard i estic fent les pràctiques de professorat amb en XXX per ser professor de tecnologia. A alguns ja us conec i als que no, doncs aprofito per saludar-vos.

Us escric per fer-vos una petita proposta; El meu treball final de màster tracta sobre la possible utilització de tècniques de relaxació per millorar la gestió de l'aula i també per a que els professors aprenguem a trobar moments de calma entre els diferents moments de tempesta que de tant en tant ens trobem durant la jornada laboral (us sona?)

Concretament, la proposta és aquesta:

QUÈ ÉS?

-Curset compost de 5 mini-clases de 15 minuts. Aprendre a calmar la respiració, a estirar les espatlles i a recuperar la sensació de benestar.

QUAN?

-5 dimecres de 15.15h a 15.30h, just abans de la reunió de la tarda. Començarem dins d'un parell o tres de setmanes.

QUÈ NECESSITO?

-Res especial. Qualsevol roba que portis està bé. Si t'has jalat un "cochinillo" a l'hora de dinar doncs millor però, així i tot, també funciona:)

ON HO FAREM?

Al XXX mateix, en una sala encara per determinar

COM M'APUNTO?

Contestant aquest mail

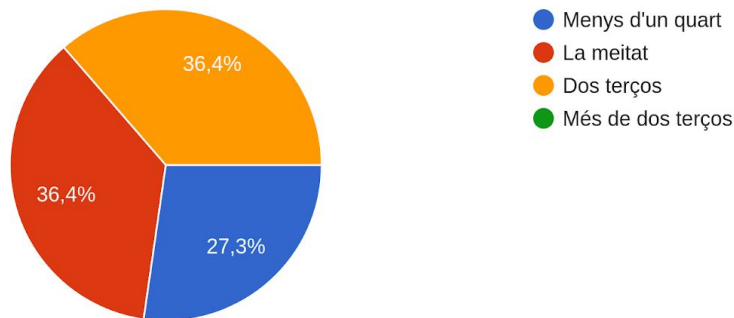
Durant els darrers quatre anys he treballat com a professor de ioga i he estat formador de formadors a l'escola Yoga Sintesis. He donat força cursos de ioga i relaxació en l'entorn laboral. Res més. Moltes gràcies per la rebuda tan bona que ens heu fet a l'Esther, en Dani i a mi al XXX. I animeu-vos a participar, de ben segur que riurem i gaudirem de l'estona plegats!
Una abraçada,

Gerard

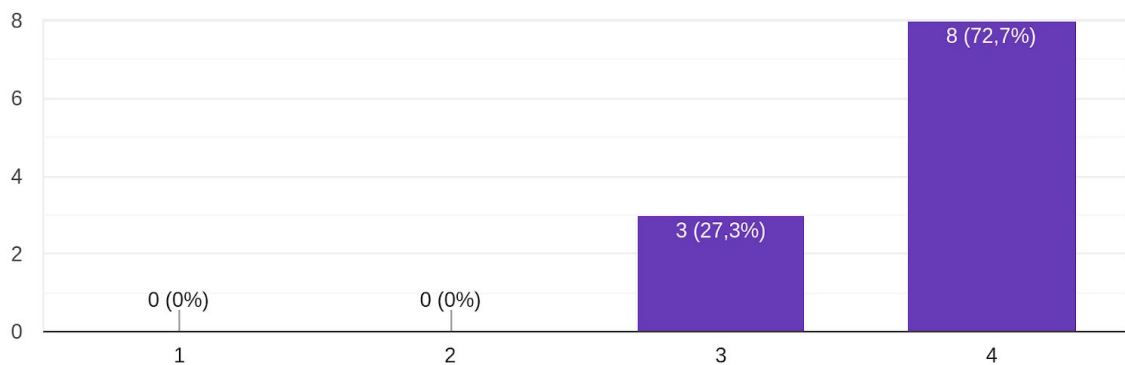
Annex II. Initial survey (11 answers)

First block: students attention and classroom management

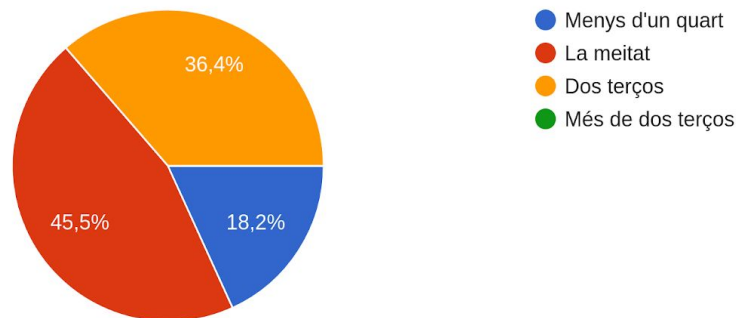
- In my opinion, which proportion of my ESO students are able to remain attentive to an explanation which unfolds during 15 minutes?
 - a) Less than a quarter of them
 - b) Half of them
 - c) Two thirds of them
 - d) More than two thirds of them



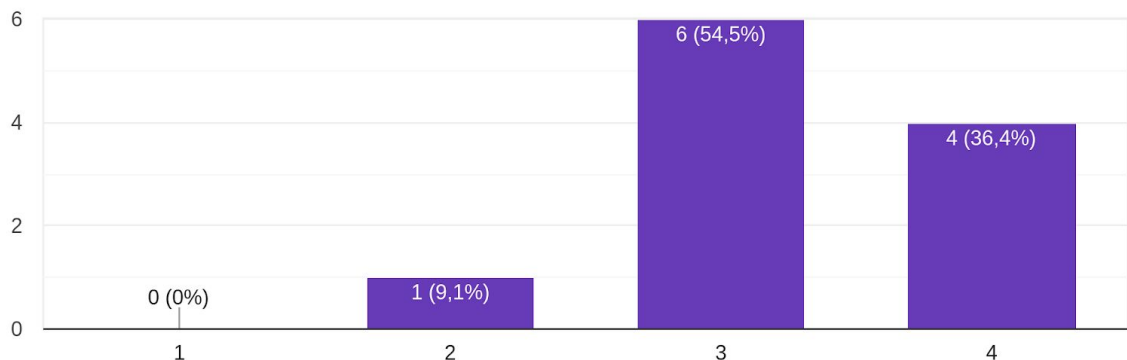
- Students attentiveness is a key factor when it comes to class management.
Not at all (1) Absolutely (4)



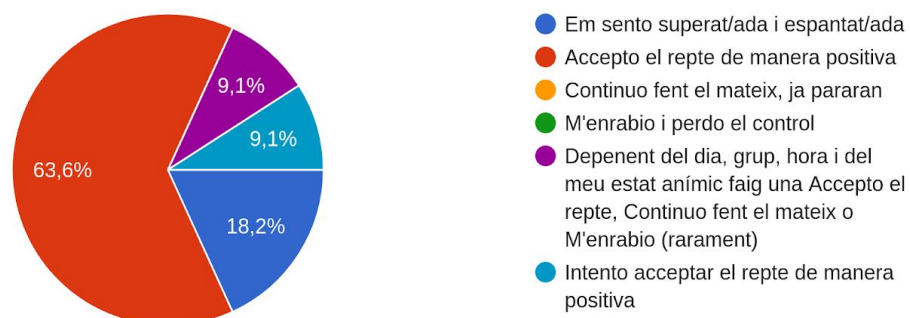
- In my opinion, which proportion of my ESO students are “active” in the classroom (taking notes in an active way, participating in an active way, reasoning, analyzing, etc).
 - a) Less than a quarter of them
 - b) Half of them
 - c) Two thirds of them
 - d) More than two thirds of them



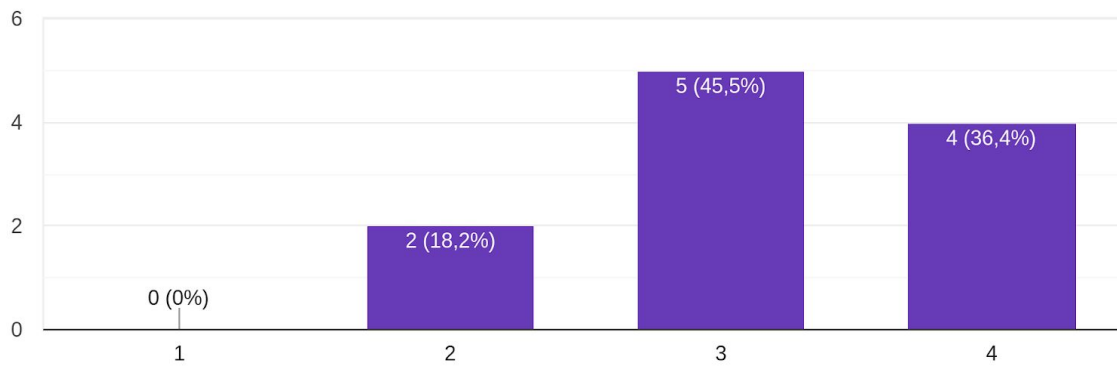
- Class management is something that I feel prepared to face:
Not at all (1) Absolutely (4)



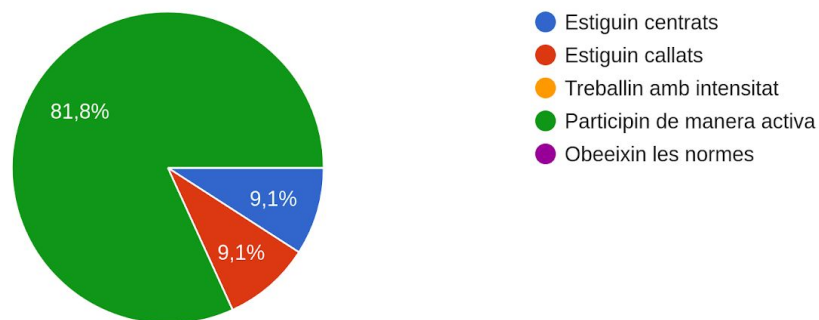
- When a class is difficult to manage because of the action of one/several students I feel (choose the answer that suits the best what you feel):
 - Overwhelmed and afraid
 - Challenged and excited
 - I keep on doing the same, they will stop eventually.
 - I feel enraged and I easily lose my temper



- Working on the students' capacity to be centered in one task is something that I consider paramount when it comes to talk about education.
Not at all (1) Absolutely (4)

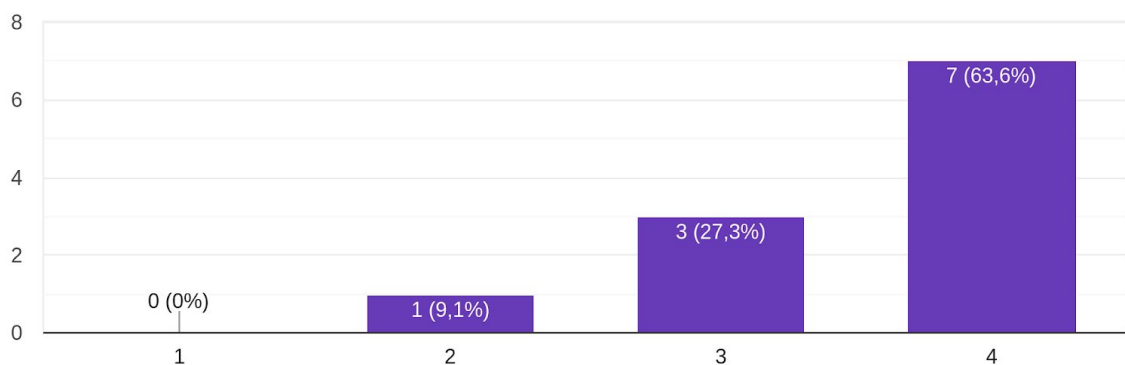


- In order to ensure a fruitful class, I want the students (select just one item).
 - to be centered
 - to be silent
 - to work hard
 - to participate in an active way
 - to obey the rules



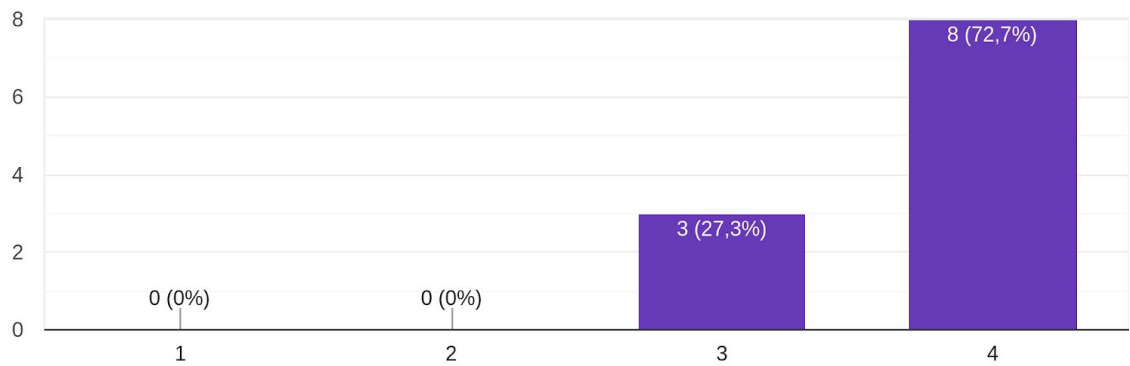
Second block: management of teachers' stress level. Relationship between teachers' stress level and students' stress level

- In my opinion, the students are sensitive to the teacher's stress level: the higher the level, the more stressed the students become.
Not at all (1) Absolutely (4)

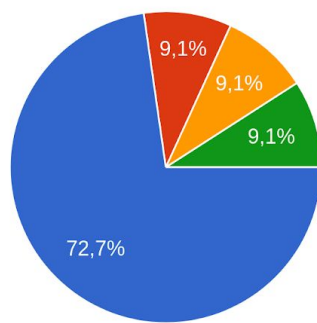


- In my opinion, the students are sensitive to the teacher's calmness level: the higher the level, the more calmed the students become.

Not at all (1) Absolutely (4)

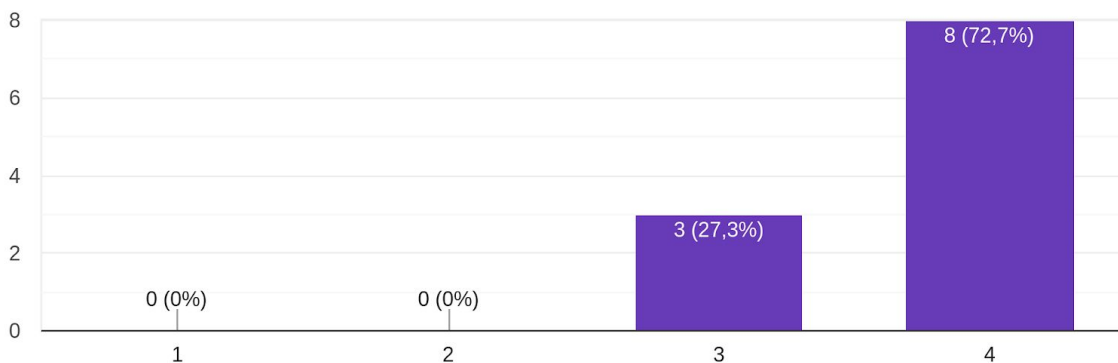


- When I feel stressed because of my job,
 - a) I am conscient of stress building up: I am proactive and I do something to revert the feeling.
 - b) I am conscient of stress building up: I put the blame on external factors (education system, students, politicians, etc).
 - c) I am not conscient of stress building up until it becomes a main issue
 - d) I rarely/never feel stressed.
 - e) Other:



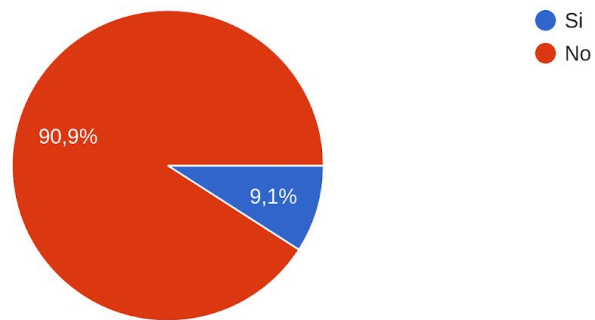
- Sóc conscient de l'estrès que s'acumula: sóc proactiu/iva i faig quelcom per revertir la situació
- Sóc conscient de l'estrès que s'acumula: poso el focus en factors externs (sistema educatiu, alumnat, ...)
- No sóc conscient de l'estrès fins que es converteix en un problema greu
- Rarament/mai em sento estressat/ada a causa de la meua feina

- Stress management is something that I consider paramount when it comes to be a highschool teacher:
Not at all (1) Absolutely (4)

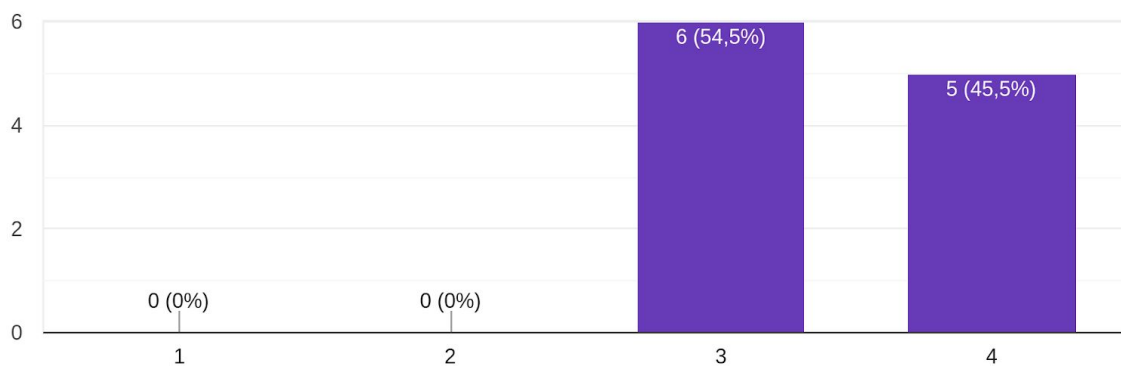


- In the past, I have been on sick leave because of stress-related issues.

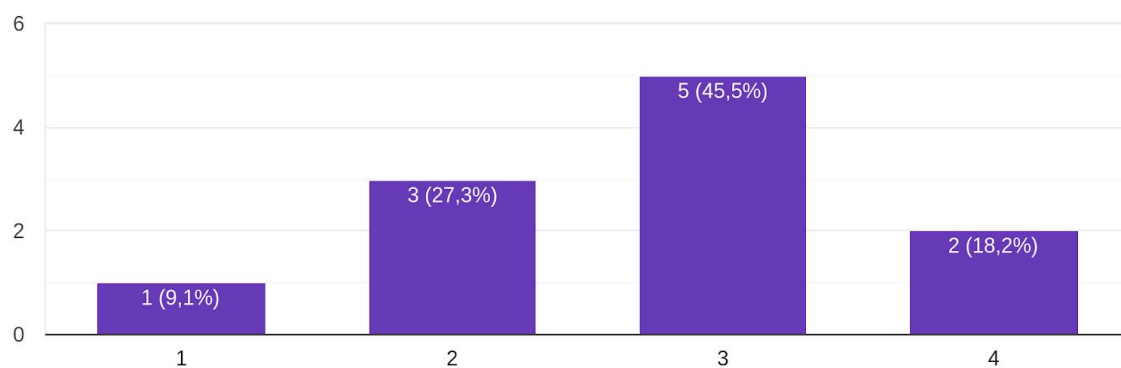
Yes / No



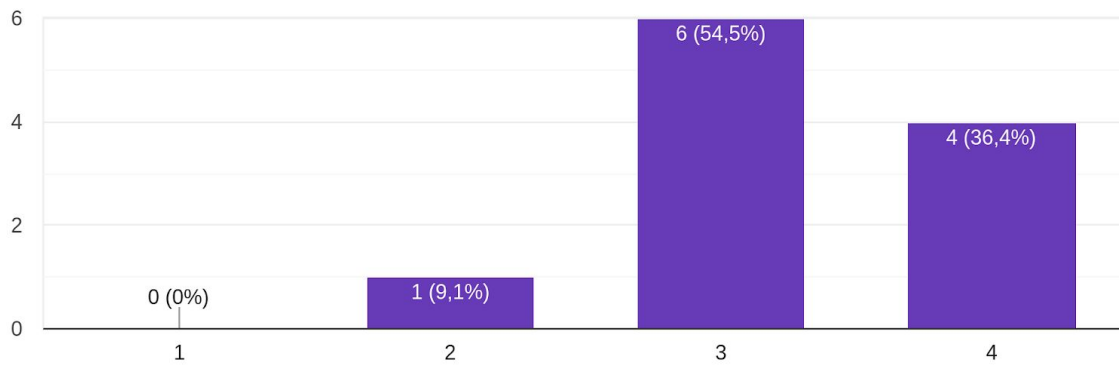
- In my opinion, the state of mental stress is accompanied by a state of physical tension (pain in the back, the neck, etc).
Not at all (1) Absolutely (4)



- I am aware of the way I breath and I feel that it is linked to my emotional state.
Not at all (1) Absolutely (4)

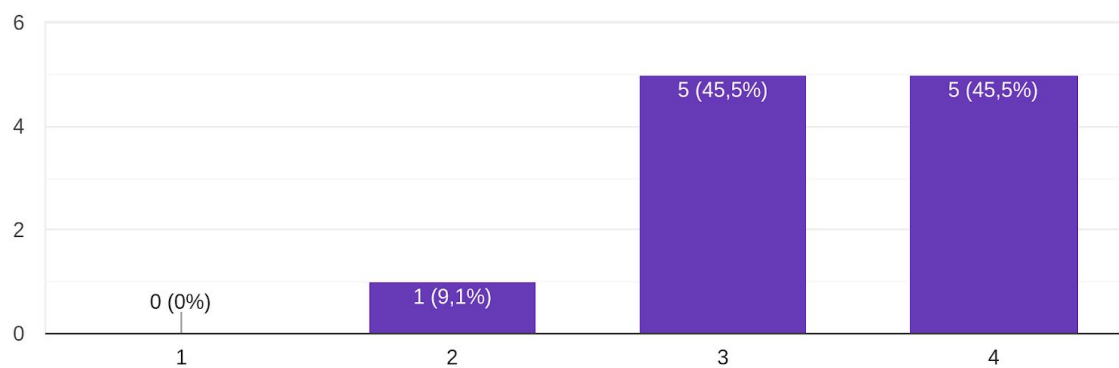


- In my opinion, the quality of my breathing is linked to the stress level I feel.
Not at all (1) Absolutely (4)

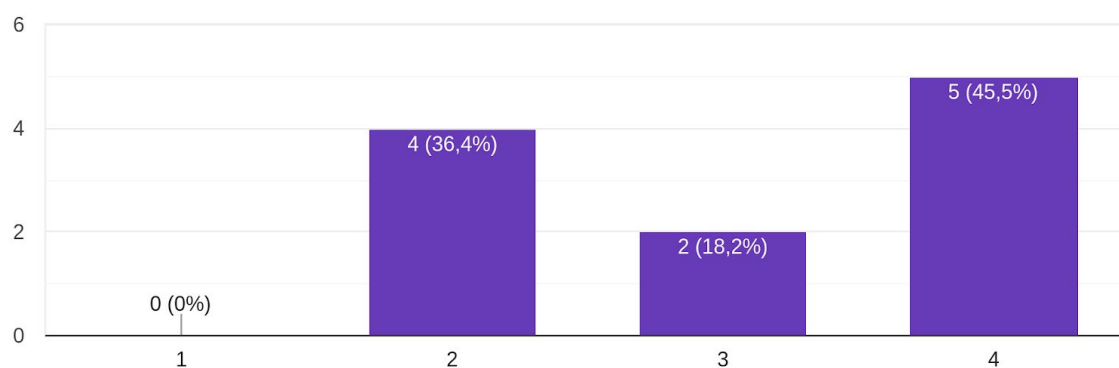


Third block: relaxation techniques and competency-based education

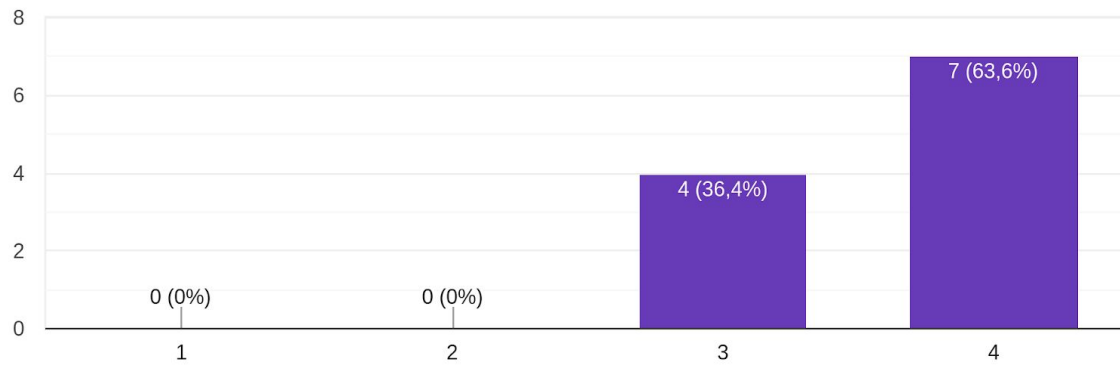
- I am interested in the competency-based model and I am eager to learn about it.
Not at all (1) Absolutely (4)



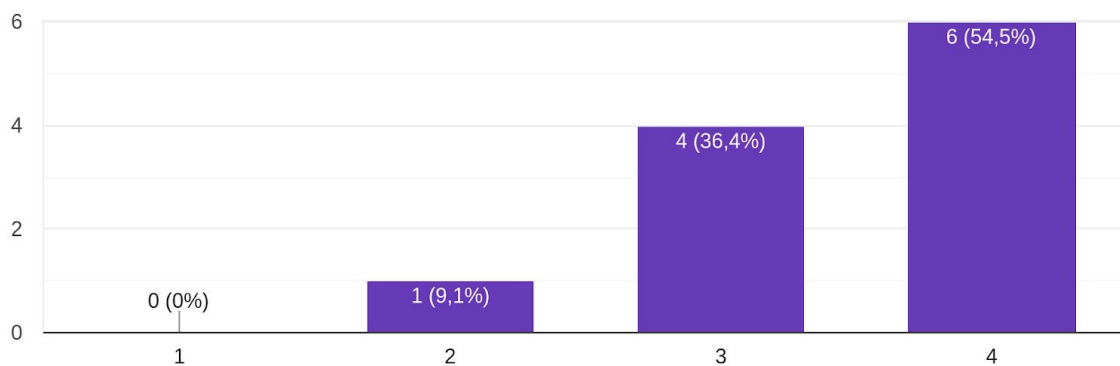
- In my opinion, I am prone to accept changes and I like to engage myself in new educational tendencies
Not at all (1) Absolutely (4)



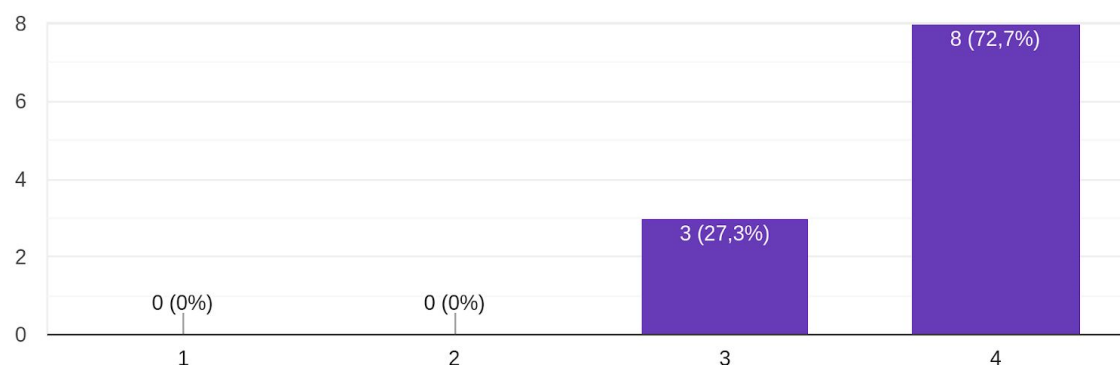
- I would dare to include brief breathing techniques in ESO classrooms if properly trained.
Not at all (1) Absolutely (4)



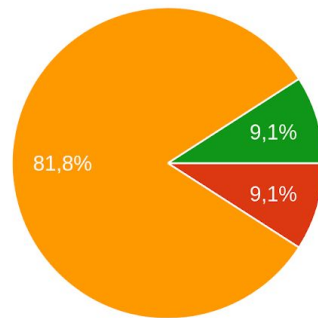
- I would dare to include brief corporal techniques (stretchings) in ESO classrooms if properly trained.
Not at all (1) Absolutely (4)



- I would dare to include brief mind-centering techniques in ESO classrooms if properly trained.
Not at all (1) Absolutely (4)



- In my opinion, competency-based education can benefit from relaxation techniques (choose the answer that better suits your thought).
-to improve the quality/quantity of the learning
-to improve the class management
-to fetch the students with skills that will be useful for life
-relaxation techniques are not important enough to be considered in the education system.



- Per millorar la qualitat/quantitat de l'educació impartida
- Per millorar la gestió de la classe
- Per ensenyar els estudiants estratègies que els seran útils durant tota la seva vida
- Les tècniques de relaxació no són prou importants per ser considerades dins el sistema educatiu

Annex III. The five sessions for teachers: charts and regulation options

WEEK #1. WORKING ON THE INNER SENSE OF VERTICALITY			
Sequence	Time	Objective	How to do it?
Posture #1: Stand still with closed eyes	5min	<ul style="list-style-type: none"> ✦ To regain the sense of inactivity ✦ To focus the attention on the body ✦ To become aware of breathing 	<ul style="list-style-type: none"> ✦ Relax the body: no effort is required. ✦ Feel your heels in contact with the ground. ✦ Travel up your body from the heels to the crown of the head. Don't rush:). As you proceed, be aware of the different parts of the body. ✦ Imagine the axe that holds your body and that links your heels, the center of your pelvis and the crown of your head. Keep a stable contact with the ground while gently projecting your spine upwards. Keep your shoulders relaxed and breath in a natural way.
POSTURE #1 REGULATION: closing your eyes will help to keep a closer contact with your body. Nevertheless, if you feel uncomfortable or dizzy, don't hesitate to open them.			
Posture #2: Bending forward	5min	<ul style="list-style-type: none"> ✦ To become aware of the different parts of the spine (cervicals, dorsals, lumbar) ✦ To stretch the muscular chain of the back ✦ To become aware of the tension around the shoulders 	<ul style="list-style-type: none"> ✦ Imagine that you are an inflatable toy. Let the air out and begin to deflate: head, shoulders, upper back and lower back until you are completely bent forward. ✦ Reverse the process and let the air in until you are inflated again. ✦ Slowly repeat the whole process and take as many inhalations and exhalations as you need to complete it. If you feel like it, experiment with short retentions (full lungs and empty lungs).
POSTURE #2 REGULATION: if you experience pain in the small of the back when deflating, bend your knees as much as desired. If it keeps on being uncomfortable, lean your hands on a chair to regulate the intensity of the posture. If you are pregnant, separate your knees as much as desired while deflating. Chair version: sit down with your back straight and relaxed. Keep your ischia in close contact with the seat and try not to lean your back on the seat. When deflating, bend forward and let your head to rest between your knees (you can also choose to place your hands on your knees during the whole process to regulate the posture).			
Posture #3: Stand still with closed eyes	5min	<ul style="list-style-type: none"> ✦ To regain the sense of inactivity ✦ To focus the attention on the body ✦ To become aware of breathing ✦ To assess the effect of the previous posture 	<ul style="list-style-type: none"> ✦ Relax the body: no effort is required ✦ Feel your heels in contact with the ground ✦ Travel up your body from the heels to the crown of the head. Don't rush). As you proceed, be aware of the different parts of the body. ✦ Consider again the axis of your body and compare the actual feeling with the one experienced during the beginning of the session. Do you feel yourself more projected? How does your back feel? And your shoulders?
POSTURE #3 REGULATION: opening your eyes is always an option. If you feel uncomfortable or tired, sit down			

and remain calm. Project your crown upwards and breath naturally.

WEEK #2. THE THREE HOT SPOTS: NECK, SHOULDERS AND THE SMALL OF THE BACK			
Sequence	Time	Objective	How to do it?
Posture #1: Stand still with closed eyes	5min	<ul style="list-style-type: none"> ✦ To regain the sense of inactivity ✦ To focus the attention on the body ✦ To become aware of breathing 	<ul style="list-style-type: none"> ✦ Relax your body: no effort is required. ✦ Feel your heels in contact with the ground. ✦ Travel up your body from the heels to the crown of the head. Don't rush). As you proceed, be aware of the different parts of the body. ✦ Imagine the axe that holds your body and that links your heels, the center of your pelvis and the crown of your head. Keep a stable contact with the ground while gently projecting your spine upwards. Keep your shoulders relaxed and breath in a natural way.
POSTURE #1 REGULATION: closing your eyes will help to keep a closer contact with your body. Nevertheless, if you feel uncomfortable or dizzy, don't hesitate to open them.			

Posture #2: Project your arms upwards	5min	<ul style="list-style-type: none"> ✦ To become aware of the tension on the shoulders ✦ To synchronize movement and breathing ✦ To develop awareness and concentration 	<ul style="list-style-type: none"> ✦ Breathing in: interlace the fingers of both hands. At the same time, project both arms upwards showing the palms of your hands up to the ceiling. ✦ Breathing out: keep the position. ✦ Breathing in: keep the position. Breath out: release the grip of both hands and open your arms sideways as the wings of a bird until they are relaxed at the sides of your body. ✦ Repeat the whole process several times. ✦ Finally, keep the arms upwards during 5 whole breathing cycles.
POSTURE #2 REGULATION: if projecting both arms upwards is painful, try to do it with slightly bent elbows. If you become a bit stressed because of the breathing rhythm, just breath naturally and do the movement slowly and intently. If you experience discomfort in your fingers or wrists, do not intertwine your fingers or do it very gently.			

Posture #3: Stretch your back while sitting on a chair	5min	<ul style="list-style-type: none"> ✦ To relax the cervical region ✦ To relax the small of the back ✦ To focus on the changes of the breathing rhythm after finishing a demanding posture 	<ul style="list-style-type: none"> ✦ Sit down on a chair with your ischia in contact with the seat and easily project your back. ✦ Feel the air naturally going in and out of your lungs without any effort. ✦ With slightly spread legs and while keeping a well projected back, bend forward until your torso lies relaxed, with your head between your knees. The arms rest effortlessly at the sides of your body. ✦ Imagine that the air you breath in goes directly to the small of your back, relaxing and opening it. ✦ Be aware of any trace of tension on your face and let it
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			go.
POSTURE #3 REGULATION: if you have had lunch recently or you feel any discomfort, place your elbows on your knees or thighs and rest your head forward.			

WEEK #3. HOW DO YOU BREATHE?			
Sequence	Time	Objective	How to do it?
Posture #1: Walk along the room feeling the ground beneath your feet	5min	<ul style="list-style-type: none"> ♦ To regain the sense of inactivity ♦ To draw the attention towards the body ♦ To become aware of breathing ♦ To become aware of the other practitioners 	<ul style="list-style-type: none"> ♦ Walk randomly along the room in a slow and attentive fashion while breathing in a natural way. ♦ When you encounter somebody, look him/her in the eyes. Smile without speaking. ♦ Be aware of every single step. Be aware of the balance of your body as you shift the weight from left foot to right foot. ♦ Reduce the pace until your breath meets your movements: lift your foot (breath in), lower your foot (breath out). Reach a gracile and flexible rhythm. ♦ Stop and find your verticality with closed eyes.
POSTURE #1 REGULATION: if you experience any pain in your feet (plantar fasciitis or bunions), find the walking pace that suits your needs, regardless of the breathing rhythm. If you feel troubled when looking your partners in the eye, don't do it: you will eventually be prepared for that.			

Posture #2: Recognize the three breathing spaces	10min	<ul style="list-style-type: none"> ♦ To become aware of the diaphragmatic, pectoral and clavicular breathing 	<ul style="list-style-type: none"> ♦ In pairs (the "breather" and the "hearer"): the breather stands while the hearer places the right palm on the partner's belly and the left palm on the small of his/her back. The breather focuses the air so it goes to the bottom of his/her belly. ♦ Right palm on the chest and left palm between the shoulder blades. The breather focuses on expanding and relaxing the chest. ♦ The "hearer" places at the back, with the palms on the shoulders of the breather, who focuses the air on the upper part of the torso. ♦ Finally, the breather performs 3 complete breathings: inhalation (belly, chest, shoulders) exhalation (shoulders, chest, belly). The roles are switched.
POSTURE #2 REGULATION: Some people feel uncomfortable when touched by others. In this case, the exercise can be done individually by feeling the three breathing spaces with one's hands.			

WEEK #4. HAVE FUN! STRETCHING IN COUPLES			
Sequence	Time	Objective	How to do it?
Posture #1: Holding hands	5min	<ul style="list-style-type: none"> ♦ To regain the sense of inactivity ♦ To focus the attention on the body ♦ To become aware of breathing ♦ To share the moment with a friend 	<ul style="list-style-type: none"> ♦ Face to face, hold hands and close your eyes. ♦ Find a comfortable verticality: feel the ground beneath your feet, project the crown upwards. ♦ Be aware of your posture, your breathing, the relaxation of the face. ♦ Shift your attention towards the palms of your hands: feel the warmth of your partner, his/her breathing rhythm, his/her heartbeat.
POSTURE #1 REGULATION: if holding hands feels uncomfortable you can also create a link with your partner by contacting back to back.			

Posture #2: Steam train	5min	<ul style="list-style-type: none"> ♦ To oxygenate the body ♦ To promote the torsion movement of the spine ♦ To synchronize breathing and body movement ♦ To be aware of the rhythm of the partner and to promote non-verbal communication through body movement ♦ Last but not least: to have fun! 	<ul style="list-style-type: none"> ♦ Face to face, right palms in contact, left palms in contact. Left feet advance, so they contact side by side. ♦ Without losing the contact with your partner, the arms move forward and backward like the cams or gears of a steam machine: when the left arm stretches forward (inhalation), left arm bends backwards and vice versa (exhalation). ♦ Begin with small movements and increase the span and the rhythm until a full and vigorizing breathing is attained. Be aware of the full left/right torsion movement of the torso in every cycle. Don't lose the sense of verticality.
POSTURE #2 REGULATION: the span of the torsional movement can be adapted to the needs of the couple, as well as the breathing rhythm. The key point is to reach a constant and fluid movement, no matter how fast or wide it is. The exercise can also be done while sitting on a chair.			

Posture #3: The big stretch	5min	<ul style="list-style-type: none"> ♦ To decontract the spine (cervical, dorsal and lumbar region) ♦ To relax the shoulders ♦ To stretch the back muscular train from heels to neck ♦ To promote a profound moment of relax and deep breathing ♦ To be aware of the 	<ul style="list-style-type: none"> ♦ In pairs (the "holder" and the "stretcher"). Holding hands, the stretcher bends forward until the torso is perpendicular to the ground. The head hangs loose and the end of the back points upwards. The holder stands and stabilizes the posture of the "stretcher", who breathes naturally but favoring long exhalations. If desired, short retentions with full and empty lungs are proposed. ♦ To undo the posture, the stretcher slightly bends the knees and regains verticality, while the holder accompanies the natural movement of his/her partner. ♦ The stretcher remains some moments in his/her regained verticality to feel the stretching of the spine.
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		remaining tensions that compromise our posture, even when there is not a support/structural reason	◆ Roles are switched.
POSTURE #3 REGULATION: if the stretcher experiences pain in the back, it is advised to slightly bend the knees and keep the legs slightly apart to reduce the intensity of the posture at a lumbar level. If this is not enough, instead of holding hands with the holder, the stretcher can lean his/her palms on the wall for further support and control.			

WEEK #5. FEELING ENRAGED OR MOODY? TRY A SOOTHING BREATHING TECHNIQUE			
Sequence	Time	Objective	How to do it?
Posture #1: Wings of the bird	5min	<ul style="list-style-type: none"> ◆ To focus the attention on the body and breathing ◆ To relax the shoulders ◆ To slightly decompress the spine ◆ To calm the mind by concentrating on a simple movement ◆ To feel the three breathing spaces ◆ To disconnect the movement of the arms and the effort on the lumbar and cervical region 	<ul style="list-style-type: none"> ◆ Standing upright with arms against the sides of the body, release the air. ◆ As you let the air in, both arms separate from the body and spread as the wings of a bird. The arms are straight (no bending on the elbow) during the whole process. Both palms touch above the head when the inhalation ends. Do not force the lumbar region in the process: just rise your arms and relax the back. ◆ Exhale and inhale while keeping the same position. ◆ Exhale while the arms open again as a pair of wings until they are against the sides of the body when exhalation ends.
POSTURE #1 REGULATION: if discomfort or tension at the shoulders or neck level is felt while rising both arms, a slight bending of the elbows is advised. Some people can experience difficulties to synchronize movement and breathing; in this case, breathing and movement can be disconnected, as a too slow inhalation/exhalation process can promote stress in the practitioner. The whole process can be done while sitting on a chair if required.			

Posture #2: The branch that bends	5min	<ul style="list-style-type: none"> ◆ To open the pectoral region ◆ To open the sides of the chest ◆ To promote a wider and easier breathing process. 	<ul style="list-style-type: none"> ◆ Hold your left wrist with your right hand and rise your arms. Be careful with the feeling of the cervical and lumbar region (no effort is required there). Breath widely and comfortably. ◆ Find a comfortable verticality, as if you were an arrow pointing upwards. Relax your body and adjust the effort of the posture. ◆ Very slowly, bend sideways to your right (a small span) and pull of your left arm with your right hand to open the intercostal left muscles. ◆ Breath deeply while feeling the stretch of the left part of your torso. ◆ Release the grip and relax. ◆ Hold your right wrist with your left hand and repeat the process to stretch the right part of your torso.
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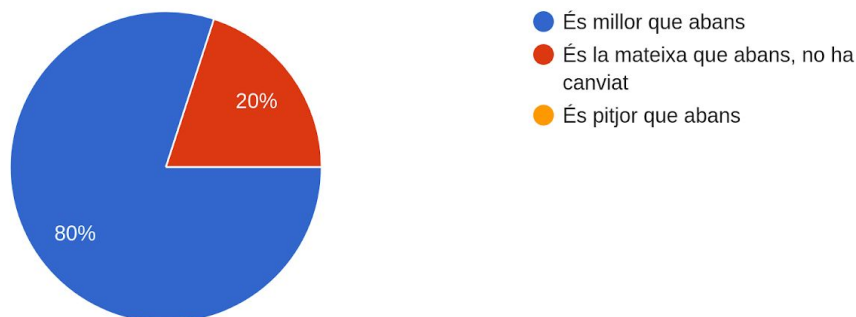
			<p>▶ Release the grip and relax.</p>
<p>POSTURE #2 REGULATION: this posture can be too intense for certain people, specially when there is reduced mobility in the shoulders region. An easier version can be practiced by holding the elbows with both hands above the head and mildly bending the torso sideways. A more affordable version can be done by resting the left palm on the left hip, lifting the right arm upwards and gently bending sideways to the left (the same movement is repeated towards the other side).</p>			

<p>Posture #3: The square breathing</p>	<p>5min</p>	<p>▶ To calm and center the mind</p> <p>▶ To reduce tensions on the breathing process</p> <p>▶ To gain some insight and distance from one's emotional state</p>	<p>▶ While seated on a chair (ischia in contact with the seat and the crown projected upwards), lean your palms on your thighs.</p> <p>▶ Release the air.</p> <p>▶ Inhale and count 5 while rising your left arm in front of you until it is stretched and parallel to the ground (position 1).</p> <p>▶ Keep your lungs full while counting 5. During this lapse of time, your left palm moves towards your chest and finally rests flat on its center (position 2).</p> <p>▶ Exhale and count 5 while stretching again your arm in front of you until it regains position 1.</p> <p>▶ Keep your lungs empty and count 5. During this lapse of time, your left hand regains its initial position on your left thigh.</p> <p>▶ Begin the cycle again, now with your right hand.</p>
<p>POSTURE #3 REGULATION: begin the exercise with an extremely comfortable breathing rhythm (as slow or fast as required). If you feel discomfort or a stressful feeling, do not practice any air retention, just breath in and breathe out as the hands move at a steady pace. If you feel tired or too much tension builds up on your back or shoulders, take a rest and breathe naturally. Begin again when you feel like it.</p>			

Annex IV. Final survey (5 answers)

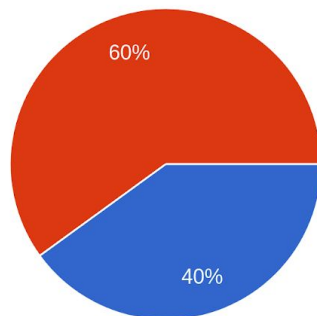
First block: students attention and classroom management

- After doing the course, I consider that my perception concerning the utility of relaxation techniques to improve the attention level of students...
 - is better than before
 - is the same, it has not changed
 - is worse than before



- After doing the course, I consider that my perception concerning the importance of attention level as a primary factor to keep the students “active” (taking notes in an active way, asking, participating)...

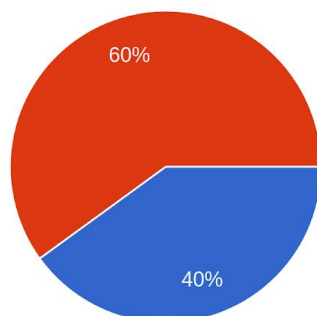
- is higher than before
- is the same as before
- is lower than before



- És més gran que abans
- És la mateixa que abans
- És pitjor que abans

- After doing the course, and according to your previous perception, how do you feel with respect to your capacity to manage the classroom in an effective way?

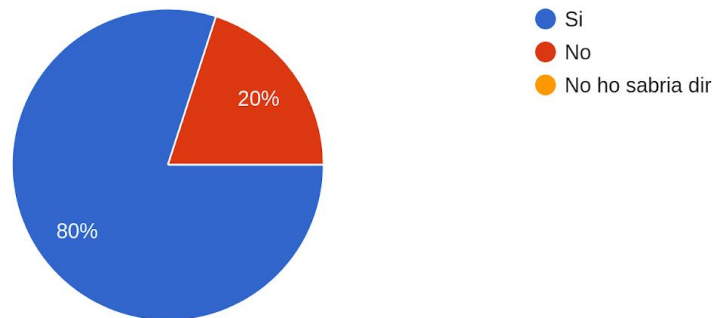
- I feel more capable
- No changes
- I feel less capable



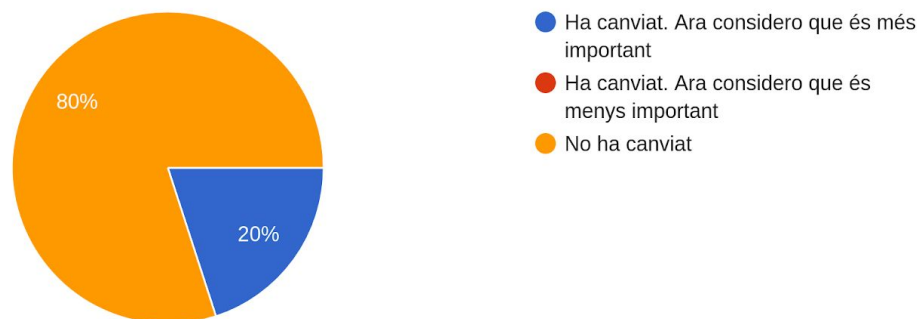
- Em sento més capacitat/ada
- Em sento igual de capacitat/ada
- Em sento menys capacitat/ada

- The course has provided tools to manage my emotions in an effective way when it comes to deal with difficult situations in the classroom.

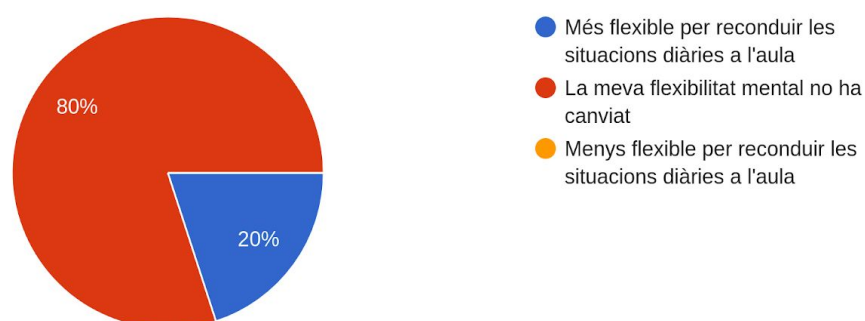
- Yes
- No
- I couldn't say



- After doing the course, and according to my previous perception, I feel that the importance I give to being mind-centered in a certain task...
 - has changed; now I consider that being mind-centered is more important
 - has changed; now I consider that being mind-centered is less important
 - has not changed

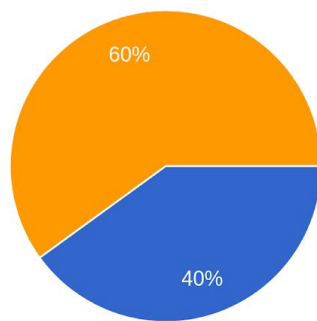


- After doing the course, and according to my previous perception, I consider myself to be...
 - more flexible to bring back daily situations in the classroom
 - equally flexible. No changes
 - less flexible to bring back daily situations in the classroom



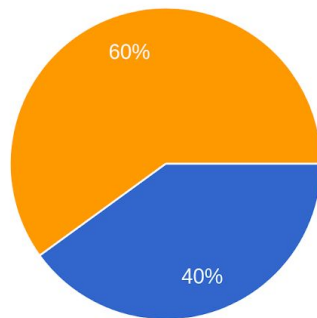
Second block: management of teachers' stress level. Relationship between teachers' stress level and students' stress level

- After doing the course, and according to your previous perception, what do you think about the next sentence: "students are sensitive to teacher's stress level"?
 - Now I feel that the link is stronger than I thought before
 - Now I feel that the link is weaker than I thought before
 - I haven't changed my mind



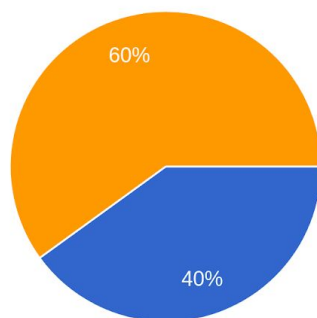
- Ara considero que la relació és més forta del que pensava abans del curs
- Ara considero que la relació és més feble del que pensava abans del curs
- No he canviat d'opinió

- After doing the course, and according to your previous perception, what do you think about the next sentence: "students are sensitive to teacher's calmness"?
 - Now I feel that the link is stronger than I thought before
 - Now I feel that the link is weaker than I thought before
 - I haven't changed my mind



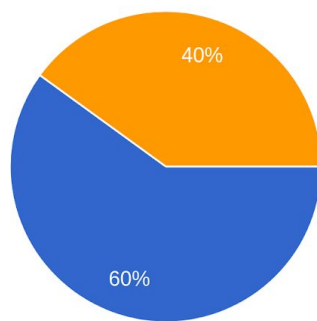
- Ara considero que la relació és més forta del que pensava abans del curs
- Ara considero que la relació és més feble del que pensava abans del curs
- No he canviat d'opinió

- After doing the course, and according to your previous perception,
 - I am more aware of the stress that arises because of my job
 - I am less aware of the stress that arises because of my job
 - my perception according to the stress arised by my job has not changed



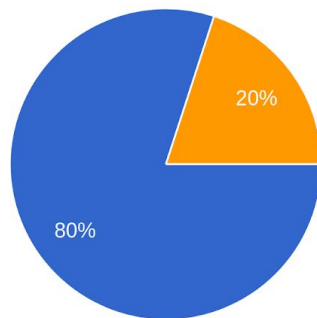
- Sóc més conscient de l'estrès que em provoca la meva professió
- Sóc menys conscient de l'estrès que em provoca la meva professió
- La meva percepció respecte l'estrès que em provoca la feina no ha canviat

- After doing the course,
 - I consider that the link between emotions and rigidity/flexibility of the body is more real than I thought before
 - I consider that the link between emotions and rigidity/flexibility of the body is less real than I thought before
 - I haven't changed my mind according to the link between emotions and rigidity/flexibility of the body



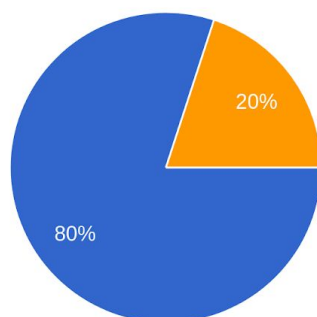
- considero que la relació entre les emocions i la rigidesa/elasticitat corporal és més real del que em pensava
- considero que la relació entre les emocions i la rigidesa/elasticitat corporal és menys real del que em pensava
- no he canviat d'opinió respecte a la relació entre rigidesa/elasticitat corporal i emocions

- After doing the course,
 - I consider that the link between emotions and breathing is more real than I thought before
 - I consider that the link between emotions and breathing of the body is less real than I thought before
 - I haven't changed my mind according to the link between emotions and breathing



- considero que la relació entre les emocions i la manera de respirar és més real del que em pensava
- considero que la relació entre les emocions i la manera de respirar és menys real del que em pensava
- no he canviat d'opinió respecte a la relació entre les emocions i la manera de respirar

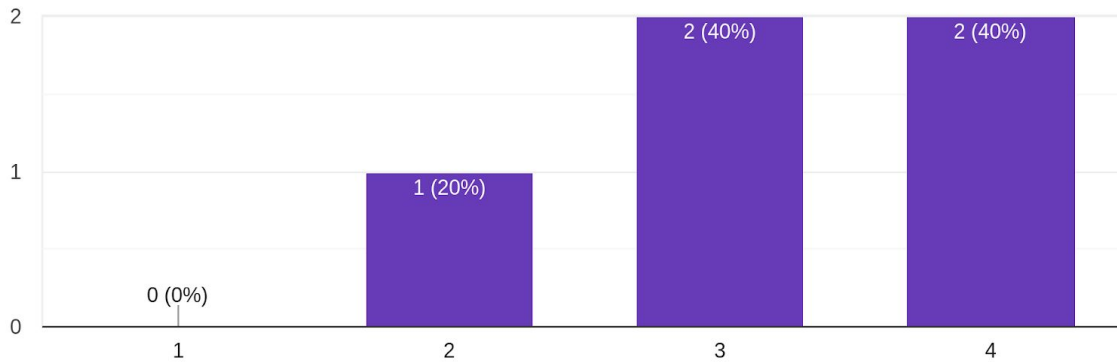
- After doing the course,
 - I consider that the link between my perceived stress level and the way I breathe is more real than I thought before
 - I consider that the link between my perceived stress level and the way I breathe is less real than I thought before
 - I haven't changed my mind according to the link between perceived stress level and the way I breathe.



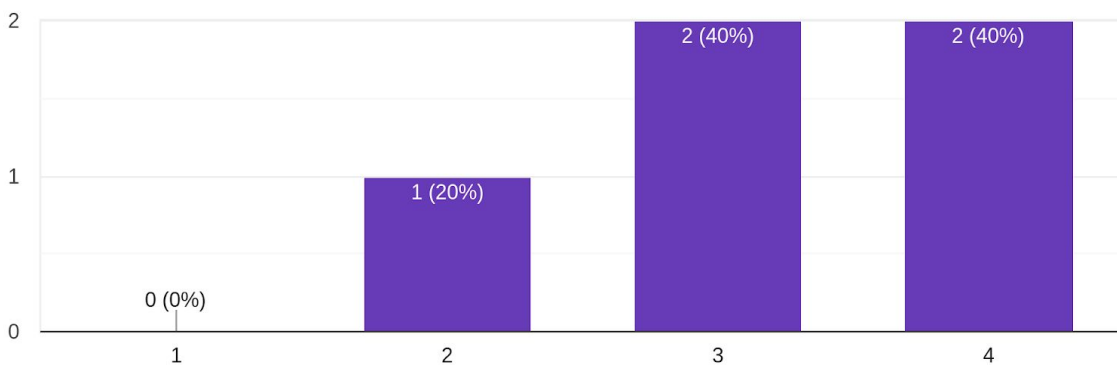
- considero que la relació entre l'estrès que sento i la manera com respiro és més real del que em pensava
- considero que la relació entre l'estrès que sento i la manera com respiro és menys real del que em pensava
- no he canviat d'opinió a propòsit de la relació entre estrès i manera de respirar

Third block: relaxation techniques and perceived skills

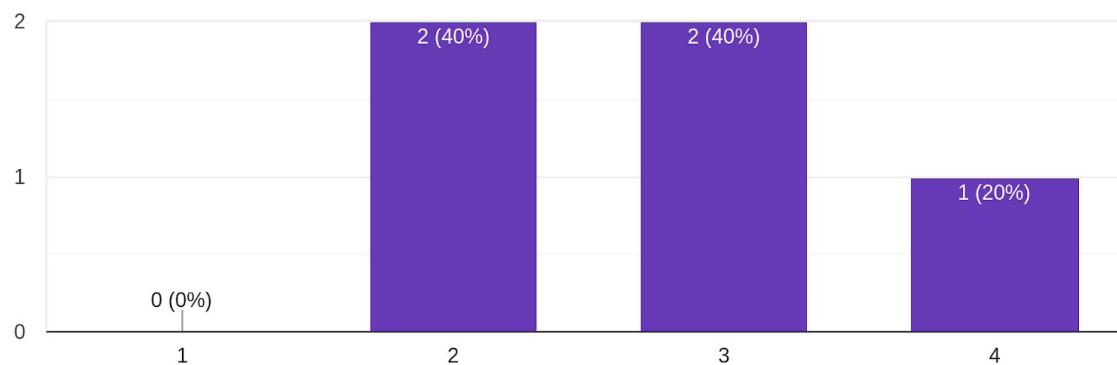
- After the training received during the course, I would dare to apply simple breathing techniques in my ESO classes:
Not at all (1) Absolutely (4)



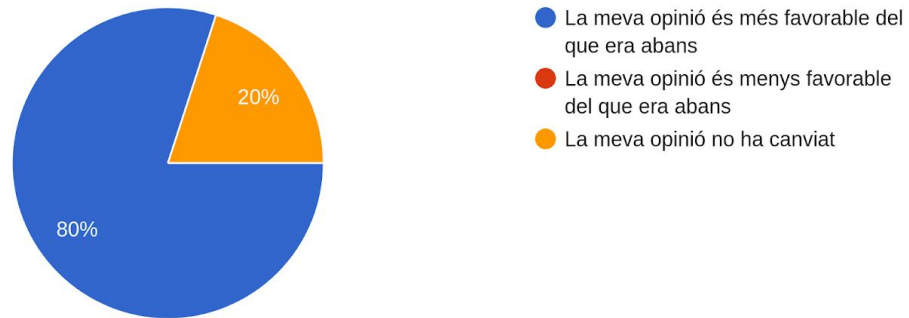
- After the training received during the course, I would dare to apply simple stretching techniques in my ESO classes:
Not at all (1) Absolutely (4)



- After the training received during the course, I would dare to apply simple mind-centering techniques in my ESO classes:
Not at all (1) Absolutely (4)



- After the training received, and according to my previous perception, assess the following sentence: “the competency-based model can benefit from relaxation techniques”:



Annex V. Evaluation chart for the 2nd ESO groups at the beginning of the 10-week program

Name of the teacher:	Date:
Subject:	Please evaluate numerically from 1 (bad, unsuitable, no) to 10 (good, suitable, yes)
Control group <input type="checkbox"/> Program group <input type="checkbox"/>	
QUALITY CRITERIA	
The overall attention level during teacher's explanation	
The overall attention level during personal work time	
The ability of the students to accept an unexpected change (a new sort of activity, a change in the work groups, a new teaching methodology)	
The overall level of cooperation between students	
The overall academic performance of the group	
The overall active participation of the students (asking questions, volunteering for solving exercises)	
The overall mood of the class	
How do I feel as a teacher when the time comes to teach that specific group of students?	
As a teacher, do I feel that I can try innovative teaching approaches with this specific group of students?	

Annex VI. A 10-week program for 2nd ESO students (weekly routine): charts and regulation options

MONDAY			
Name of the activity	Time	Objective	How to do it?
A mindful moment	5min	<ul style="list-style-type: none"> ▶ To regain the sense of inactivity and silence ▶ To become aware of breathing ▶ To feel secure and comfortable among your peers 	<ul style="list-style-type: none"> ▶ Sit down with straight back or relax your head on your desk with crossed arms. ▶ Close your eyes and breath deeply, several times. ▶ Focus the attention on your breathing and feel the air going in and out of your lungs ▶ Ask yourself how does it feel: is your head full of movement or is it calm and quiet?
REGULATION: it is important to explain that it is ok if the mind is busy or nervous and that the goal of this exercise is just to be aware of the real feeling: no judgement, no changes are required. Some students may feel uncomfortable with closed eyes; it is ok to keep them open.			
neck and shoulders	5min	<ul style="list-style-type: none"> ▶ To stretch the upper part of the spine ▶ To mobilize shoulders and to relax them ▶ To be aware of the breathing rhythm ▶ To focus attention on the body 	<ul style="list-style-type: none"> ▶ Sit down with straight back. Close your eyes and take a few deep breaths. ▶ Draw 5 gentle circles with your head: breath in when the head moves backward and breath out when it moves forward. Change the sense of movements and draw 5 more circles. ▶ Lace the fingers of both hands and project your palms to the ceiling while breathing in. Undo the posture while breathing out (5 times). ▶ In the last movement, remain with your palms projected to the ceiling and take 5 deep breaths before releasing the posture. ▶ Take a moment to ask yourself how do you feel.
REGULATION: we teach the students to regulate themselves: it is not a competition and it is ok to do a very gentle movement or none at all if they feel like it. There is no need to rush, it is an intimate moment that we share together.			

TUESDAY			
Name of the activity	Time	Objective	How to do it?
Check your attention	5min	<ul style="list-style-type: none"> ▶ To practice self-awareness ▶ To regain the sense of inactivity ▶ To nurture the sense of self-control 	<ul style="list-style-type: none"> ▶ Stop the explanation and let one minute for the students to stop doing what they do. ▶ Is your mind here in the class or perhaps is it wandering somewhere else? ▶ Leave them a couple minutes to take the message. After that, tell them that it is ok if the mind wanders and moves far from the class, even in the middle of an explanation; the bottom line is: no matter where your mind drifts, you can learn to control it and to take it where you want it to be.
REGULATION: this exercise can be a bit complicated for 2nd ESO students. Expect a certain level of noise and leave them ample time to settle in a quiet mood. If this is not the case, do not force it: you all will eventually succeed with time and practice.			

Tense and let go	5min	<ul style="list-style-type: none"> ▶ To feel the tension/relaxation difference in the body ▶ To focus attention on the body ▶ To regain the sense of quietness 	<ul style="list-style-type: none"> ▶ Ask the students to stand up and to relax their posture ▶ Tense both your arms and clench your fists as tightly as possible. Ask them to maintain the strain for 3 whole breaths. After that, completely relax and ask them to feel the difference. ▶ Apply the same technique for the legs ▶ Ask them to perform any stretch they desire. After that, close your eyes for a minute and ask them to be aware of the feeling they experience.
REGULATION: tension/relaxation technique needs some practice: students can feel confused when asked to tense a specific part of the body (they will tense other parts also). It is ok if they do, with time they will learn to focus the muscular action on specific parts of the body. Besides, some students can feel tired or experience discomfort when asked to tense muscles during several breathings; you can tell them that the goal of the technique is to experience exhaustion so, once they are there, they can release the tension and relax.			

WEDNESDAY			
Name of the activity	Time	Objective	How to do it?
Relaxed abdominal breath	5min	<ul style="list-style-type: none"> ▶ To nurture attention ▶ To promote calmness ▶ To develop a key skill in terms of stress control 	<ul style="list-style-type: none"> ▶ Stand up and do a few movements to relax the body and stretch it. ▶ Place the palms of your hands flat on your belly, just below the navel. ▶ Deep slowly and deeply and try to move all the air down to the bottom of your belly. Do not strain to do it, just be patient and let the air flow down. At the same time, feel both hands moving forward as the belly expands. ▶ Gently exhale and feel the navel returning to its original position. Try not to press your hands against the abdomen and let your attention to focus on this simple and natural movement. ▶ Go back to your natural breathing, close your eyes and relax both arms. How does it feel?
REGULATION: abdominal breath is a natural way to return to calmness. Some students can feel confused about the mechanics of this breathing technique. Be patient and let them experiment it. The main goal is to shift breathing from a clavicular pattern (shallow and anxious) towards an abdominal pattern (slow and rhythmic).			

Bending forward	5min	<ul style="list-style-type: none"> ▶ To regain the sense of inactivity and self-awareness ▶ To stretch the muscular chain of the back ▶ To reduce the tension around the shoulders 	<ul style="list-style-type: none"> ▶ Imagine that you are an inflatable toy. Let the air out and begin to deflate: head, shoulders, upper back and lower back until you are completely bent forward. ▶ Reverse the process and let the air in until you are inflated again. ▶ Slowly repeat the whole process and take as many inhalations and exhalations as you need to complete it. If you feel like it, experiment with short retentions (full lungs and empty lungs).
REGULATION: some students may experience pain in the small of the back when deflating: If so, tell them to bend their knees as much as desired. If it keeps on being uncomfortable, tell them to lean their hands on a chair to regulate the intensity of the posture. Chair version: tell them to sit down with their back straight and relaxed. When deflating, invite them to bend forward and let their head rest between their knees (they can also choose to place their hands on their knees during the whole process to regulate the posture).			

THURSDAY			
Name of the activity	Time	Objective	How to do it?
The jumping monkey	5min	<ul style="list-style-type: none"> ▶ To regain the sense of inactivity ▶ To promote healthy skills to keep stress at bay ▶ To nurture resilience and self-awareness 	<ul style="list-style-type: none"> ▶ Stand up, make a few decontracting movements and close your eyes. ▶ Imagine your mind to be a monkey: observe how it jumps from branch to branch, from idea to idea, how it moves in circles on and on. ▶ Take your time and notice that you observe your mind and that the mind is not you. Take your time and let this fact to sink deeply in your conscience. ▶ Take a deep, slow breath and keep the air inside of you while counting 4. Then, slowly release the air. Repeat this process 5 times. ▶ Come back to your natural breathing and observe the monkey: is it quieter than before?
<p>REGULATION: the observation of the self can be a complicated concept for some students. Nevertheless, and even if they do not grasp the idea, they will breath deeply and take a short break from the movement of the day. If any student does not feel like doing it, it is ok: he or she can sit down in silence while the rest perform the exercise. If somebody feels uncomfortable with closed eyes, he or she can open them; the key is that they feel that this very moment is for them and that they are free to respond to their very needs.</p>			

Couples	5min	<ul style="list-style-type: none"> ▶ To develop the sense of empathy ▶ To stretch the muscular chain of the back ▶ To be aware of being part of a group 	<ul style="list-style-type: none"> ▶ In couples, the students stand up and place themselves back to back. ▶ They take a moment to adjust themselves to the shape of the back of their partner and to feel the contact of his/her body. ▶ It is time to take a few long breaths and to feel the breathing rhythm of the partner in the skin of the back. ▶ Once the breathing rhythm is synchronized; breathing in: both partners stretch their arms upwards until they touch the fingers of their partners above the head. Breathing out: they bend forward and try to join hands with their partner between their legs. The whole cycle is repeated several times until both students rest in the bent position (joining hands). ▶ When the posture is over, they embrace each other.
<p>REGULATION: this posture works better when both students are the same size. Nevertheless, as empathy and close contact with another student is the real goal of the exercise, we can leave them to form couples with their desk companions. If some students feel really uncomfortable because of their partner, we can arrange different couples, but this should be the last option. The first times we experiment with this exercise, we may expect agitation and laughs: it is ok, they will grow used to it and centering and silence will eventually appear.</p>			

FRIDAY			
Name of the activity	Time	Objective	How to do it?
What did I learn?	5min	<ul style="list-style-type: none"> ▶ To promote self-awareness ▶ To regain the sense of calmness and inactivity ▶ To settle down the achievements of the day 	<ul style="list-style-type: none"> ▶ Stand up, stretch your arms and legs and do any movement you feel like to do. ▶ Close your eyes and focus your attention on the breathing rhythm and the breathing movement. ▶ Ask yourself: what did I learn today? and let the answer to appear inside of your mind without effort. Do not try to cheat yourself, just let your mind to answer the question while you observe it. ▶ Take a deep breath and open your eyes.
REGULATION: all the exercises that promote self-awareness and inner asking can feel uncomfortable, specially if the student is really agitated or if he/she experiences strong inner turmoil. We give them the option to do the exercise or, if they prefer, to rest for a moment in calm. As all the other yoga and mindfulness exercises, it takes time until the students interiorize the routines and explore themselves.			

In the eyes	5min	<ul style="list-style-type: none"> ▶ To develop the sense of empathy ▶ To recognize the other as a valuable human being ▶ To be aware of being part of a group 	<ul style="list-style-type: none"> ▶ In couples, stand up and place yourselves face to face. Do some stretching movements and relax the body. ▶ Close your eyes and focus on the breathing rhythm. ▶ When you feel like it, open your eyes and stare your partner in the eye. Observe your feelings while you do it. If it feels really uncomfortable, close your eyes again. ▶ Take a deep breath and embrace your partner.
REGULATION: expect the students to laugh and to move a lot the first times you practice this experience. It is normal: looking somebody in the eye in a sustained way is something we are not used to. Here you have a trick to proceed in a gradual way; first of all, ask the students to look at the mouth of their partner for a couple minutes; after that, the tip of the nose. And finally, the eyes.			

Annex VII. Evaluation chart for the 2nd ESO groups at the end of the 10-week program

Name of the teacher:	Date:
Subject:	Please evaluate numerically from 1 (bad, unsuitable, no) to 10 (good, suitable, yes)
Control group <input type="checkbox"/> Program group <input type="checkbox"/>	
QUALITY CRITERIA	
The overall attention level during teacher's explanation	
The overall attention level during personal work time	
The ability of the students to accept an unexpected change (a new sort of activity, a change in the work groups, a new teaching methodology)	
The overall level of cooperation between students	
The overall academic performance of the group	
The overall active participation of the students (asking questions, volunteering for solving exercises)	
The overall mood of the class	
How do I feel as a teacher when the time comes to teach that specific group of students?	
As a teacher, do I feel that I can try innovative teaching approaches with this specific group of students?	
As a teacher, have you found any remarkable change in any of the students of the group? If so, can you comment on that?	
As a teacher, do you find the overall program to have a positive impact on the group of students? If yes, please comment which have been the improvements. If no, please comment on the possible inconveniences or observed negative effects.	